Loo Choo, Bonin &c.

138 Millettia speciosa.
137 " nitida.
136 " Championi.
119 Zornia diphylla.
120 Alysicarpus vaginalis.
121 " bupleurifolius.
122 Lourea obcordata.
123 Desmodium triquetrum.
124 — pulchellum.
125 — elegans.
127 — triflorum
128 — reticulatum.
129 Canavalia gladiata.
130 Cajanus Indicus.
131 Atylosia scarabæoides.
132 Rhynchosia volubilis.
133 Eriosema Chinense.
476. Pycnospora hedysaroides.
140. Dalbergia rubiginosa.
139. D — Millettii, n. sp.
135. Derris uliginosa.
134 Pongamia glabra.
141 Bowringia callicarpa.
142 Ormosia emarginata
149 Cæsalpinia Nuga.
148 — vernalis
146 Cassia suffruticosa
147 — mimosoides.
143. Phanera variegata.
145. " Championi.
144 " Corymbosa.
151 Leucæna glauca.
150 Acacia concinna.
152 Albizzia Millettii
154 Pithecolobium lucidum.
153 — clypearia.
155 Pygeum latifolium. Miq.
159 Rubus reflexus.
160 — parvifolius.
161 — leucanthus. Hance
162 Spiræa Cantoniensis. Lour.
156. Photinia prunifolia.
157, 158 Rhaphiolepis Indica.

Do
239. Carallia integerrima
163 Jussiæa villosa.
164 Ammannia (Ameletia) rotundifolia
165. Melastoma repens.
166, 167. — macrocarpum.
169 Osbeckia Chinensis.
478. Aplectrum? parviflorum n. sp.
170. Bæckia frutescens.
171 Syzigium buxifolium.
172 — odoratum
174. Karivia umbellata.
175. Begonia laciniata
184 Rhodoleia Championi.
185. Liquidambar Chinensis.
186. Eustigma oblongifolium.
183. Distylium racemosum.
176. Itea Chinensis.

25. ex parte, Drosera Burmanni
" " " D. Loureirii
177. Hydrocotyle rotundifolia.
178 — asiatica.
179. Paratropia Cantoniensis.
180 (Hedera) Dendropanax protea.
608. Marlea begoniifolia.
399. Schoepfia Chinensis.
181 }
182 } Viscum Orientale

475. Berchemia ? similiflora. n. m.
~~72~~ 78 ex parte. Vitis parvifolia, Roxb.
77 " lanata, Roxb.
78 ex parte " heterophylla, Thunb.
80 " angustifolia. Wall.
79 " Cantoniensis.
74 Glycosmis citrifolia.
75. Sclerostylis buxifolia
83 Zanthoxylum nitidum.
82 " cuspidatum.
85 " Lamarckianum, Cham. & Schl. (Z. pteleaefolium, Champ.)
86 Toddalia aculeata.
87. Cyminosma pedunculata.
88 Brucea Sumatrana.
474. Picrasma quassioides.
108, 109. Rhus succedaneum.
147, 473. Spondias ? imperfect.
112. Rourea santaloides.
111 " microphylla,
115. Crotalaria retusa.
114 " albida.
117 Indigofera hirsuta.
118 " venulosa, Champ.

Rottlera ? cordifolia [illegible]

Croton lachnocarpus. —

" Chinense

Glochidion Wrightii

Ficus Wrightii

" ? Harlandi.

Pellionia scabra.

Smilax hypoglauca

Eriocaulon heteranthum.

~~Fimbristylis leptoclada.~~

~~Arthrostyles Chinensis.~~

✓ Garnotia patula. (Berghausia)

✓ Apocopis Wrightii

~~Aristida Chinensis~~.

✓ Ischaemum leersioides

✓ " ophiuroides

Hongkong

Actinidia Championi.

~~Millettia Championi~~ ?

Anplectrum parviflorum.

Guettardella Chinensis.

Ixeris repens.
& Japan spec.

"

"

Marsdenia lachnostoma

Stephanotus Chinensis.
Figure the Heliotropium Japonicum
or Tournefortia Arguzia,

Solanum Wightii n. n
Gmelina Chinensis. " "
Alseodaphne parviflora.
Azalea grandiflora.

The Bonin Islands were ~~reach~~ visited on the 19th of October 1854 & we remained there till the 3d of November. The immediate vicinity of Lloyd Harbor was pretty thoroughly examined. None of the other islands were visited.

On the 17 we reached Loo Choo & remained till the 13th December. During this interval the southern end of the island was pretty well examined

On the 19th of January following we landed on Harbor Island & spent a few hours. A considerable variety of plants was obtained. The 22d was occupied in successful botanizing on Ousima

On the 20th of April we landed on Agenhu a small island near Loo Choo & an hour or two were passed in collecting such plants as showed flowers or fruit. Two days after Loo Choo was again visited & during our short stay of four days such plants as were in season were obtained. Some plants from the Amakarima islets were collected by Mr Small now on board the Steamer. On the 29th a fine harbor at the southern end of Katonasima was entered & during the four days spent here many fine Specimens were procured. May 3d another harbor towards the northern end of the island was entered. Two days were pleasantly & profitably spent here.

During the last fifteen or twenty days Mr Small attached to the Steamer John Hancock had the opportunity of visiting the Amakarima group of islands as well as ~~beside~~ some of the islets northward from Loo Choo on which he procured a variety of plants ~~in addition~~ ~~beside~~ He also landed on other parts of Kalanosima than those at which the Vincennes touched.

Loochoo. Bonin. & other neighboring Islands

Clematis Meyeniana Walp 1
Ranunculus diffusus DC
" ternatus Thunb 3
" sceleratus Linn 4
Kadsura Japonica Sieb & Zucc
Stephania rotunda Linn
Cocculus diantherus Hook & Arn?
Nandina
Corydalis racemosa Pers 5
Nasturtium Indicum DC
Capsella bursa-pastoris Moench
Senebiera integrifolia DC
Sinapis brassicata L?
Raphanus Raphanistrum L. Pittosporum Tobira Ait 12
Viola Patrinii DC " glabrum H & A
" Canina L. 10
Drosera Loureirii H & A
Malachium aquaticum Fries
Stellaria media Sm
Arenaria serpyllifolia L
Sagina maxima Gray
Calophyllum inophyllum L
Stachyurus praecox S & Z
Ternstroemia japonica Thunb acuminata rupa
Eurya japonica Thunb
Camellia sasanqua Thunb
" japonica "
Schima Noronhae Reinw

Sida alba Linn
Abutilon Indicum Don
Urena morifolia DC?
Hibiscus tiliaceus L
" " var?
" abelmoschus L
" mutabilis L
" rosasinensis "
Thespesia populnea
Elaeocarpus japonicus S&Z
" photiniaefolius H&A
" " var
Polygala Japonica Houtt
Cardiospermum Halicacabum L
Sapindus Mukurossi Gaertn
Meliosma rigidum S&Z
Acer oblongum Wall
Citrus aurantium L.
Murraya exotica "
Turpinia arguta Seem
" nepalensis Wall
Euscaphis staphyleoides S&Z
Schoepfia Jasminodora S&Z
Vitis Japonica Thunb
" Thunbergii S&Z
Oxalis corniculata L
Erodium moschatum Willd
Zanthoxylum ailanthoides S&Z.
" avicennia DC / X pterota L
Evodia Lamarckiana Benth
Toddalia aculeata Pers
Acronychia 46
Euonymus Japonicus Thunb / E echinatus Wall

Catha diversifolia sp n.
Celastrus articulatus Thunb
Berchemia lineata DC
Rhamnus virgatus Roxb
Rhus succedaneum L.
Melia Azedarach L
Thermopsis Chinensis Benth
Medicago lupulina L
Melilotus Indica All
Astrag lotoides
~~Diphaca~~ Ormocarpum sennoides DC = Diphaca cochinchinensis Lour
Desmodium podocarpum DC
Lespedeza cuneata G. Don
Dolichos Lablab
Vigna luteola ?
Canavallia turgida Grah
Mucuna gigantea DC
Derris uliginosa Benth var Loureiri
" chinensis "
Pongamia glabra Vent
Guilandina Bonducella L
Prunus macrophylla S&Z
Rubus parvifolius L
" rosaefolius Smith
Rubus bracteosus A Gray
" ~~[illegible]~~ incisus Thunb. var integrifolius
Photinia arbutifolia Lindl
Rhaphiolepis Japonica S&Z.
" ~~Indica~~ var.
Agrimonia Eupatoria L var

Rosa Indica L.
" sempervirens L. var microphylla
Osteomeles anthyllidifolia Lindl
Specimen wanting — Potentilla
~~Fragaria~~ Fragaria — specimen wanting
Portulaca Terminalia Catappa L.
Pemphis
Jussiaea octofila DC.
Balanophora
Melastoma macrocarpum Don
Syzygium cuneatum sp. n. 85
S. Bonninense sp. n.
Lagenaria vulgaris Ser.
Zehneria ~~acuminata~~ mucronata Blume
Bryonia laciniosa L.
Trichosanthes
Kalanchoe
Sedum Formosa sp. n
Sedum uniflorum Hk Arn. aff. 91
Portulaca oleracea L
" quadrifida L
Sesuvium portulacastrum ~~Act~~ Linn
Tetragonia expansa Ait.
Deutzia crenata S&Z
" scabra Thunb
Hydrangea
Itea Chinensis H&A
Distylium ellipticum sp. n 174
Hydrocotyle nitidula Rich
" rotundifolia Roxb
" Asiatica L.
Cryptotaenia Canadensis DC.
Angelica japonica A. Gray
Torilis Japonica DC

Torilis scabra DC
Cymopterus? littoralis A Gray
Peucedanum Cantoniense H & A
Hedera Helix L.

Aucuba Japonica Thunb
Loranthus Viscum articulatum ~~Burm~~ Loranthus 260
Sambucus adnata Wall
Viburnum odoratissimum
〃 phlomidifolium Lin
Galium trachyspermum ~~L~~ A. Gray
〃 Aparine L
Serissa foetida Comm
Damnacanthus Indicus Gaertn
Morinda umbellata L
Psychotria serpens L
〃 〃 〃 var
〃 elliptica Ker
〃 homalosperma A. Gray
Paederia foetida L
Mephitidia (Lasianthus) Wallichii W & A
〃 acuminata 〃
Stylocoryne subsessilis A Gray
〃 racemosa Cav
Randia? canthioides Champ
Mussaenda glabra L.
Gardenia florida L
Oldenlandia paniculata L
~~Hedyotis~~ leptosepala A Gr
Buddleia curviflora H & A

Vernonia cinerea Less
Adenostemma latifolium Don
Eupatorium Lindleyanum Wall
" Reevesii Wall
Calymeris ciliata A. Gray
Asteromaea Indica Bl.
Solidago Virgaurea L
Dichrocephala latifolia DC
Conyza japonica Less
Blumea
Eclipta prostrata L
Siegesbeckia orientalis L
Wedelia calendulacea Less
Wollastonia scabriuscula DC
Bidens chinensis Willd
" pilosa L
Pyrethrum sinense Sabine
Chrysanthemum coronarium L
Artemisia vulgaris L
" campestris "
Tanacetum Chinense Gray
Gnaphalium multiceps Wall
" involucratum Forst
Emilia sonchifolia DC
Ligularia Kaempferi S&Z
Aplotaxis multicaulis DC
Cirsium brevicaule A. Gray
" " var
Lappa major Gaertn
Ixeris debilis A. Gray

Ixeris repens A. Gray
" ? linguaefolia "
Youngia integra A. Gray
" japonica DC
Lactuca brevirostris Champ?
Sonchus oleraceus L
" asper Vill
Scaevola Lobelia L
Lobelia polystachya sp. n.
Adenophora verticillata Fisch
Wahlenbergia marginata A. DC
Vaccinium Wrightii A. Gray
Azalea Indica L
Rhododendron triflorum sp. n.
Androsace patens Wr.
Stimpsonia chamaedryoides Wr. Maesa montana DC
Myrsine neriifolia S. & Z
Ardisia pauciflora Heyne
" pedunculosa Wall
" crispa A. DC
Sideroxylon ferrugineum H & A
Sapota costata? Diospyros japonica S&Z Diospyros Kaki L. f.?
Anagallis arvensis L
Lysimachia lineariloba H & A
" japonica Thunb
Symplocos leptostachys S. & Z.
" japonica A. DC.
" neriifolia S&Z
Styrax japonicus S. & Z
Ligustrum Japonicum Thunb

Fraxinus longicuspis
Ilex integra Thunb
" rotunda "
Vinca rosea L
~~Aganosma~~ Ochrosia borbonica Gmel
Parechites Thunbergii A Gray
Vincetoxicum Japonicum Morr. & Dcne
Heligme Javanica Bl.?
Cordia Thyrsiflora S. & Z
Ehretia heterophylla Spreng
" macrophylla aff. Tournefortia argentea L
Bothriospermum tenellum Fisch. Meyer
Eritrichium pedunculare DC.
Pharbitis insularis Chois
Ipomoea reptans Poir
" tuberculata R. & S
Calystegia Soldanella R Br
Dichondra repens L
Solanum Osbeckii Dun
" nigrum L
Physalis pubescens L.
" Peruviana "
Capsicum cordiforme Mill
" pyramidata " ?
" annuum L
Lycium chinense Mill
Mazus rugosus Lour.
Bonnaya verbenaefolia Spreng
Veronica agrestis Linn.
" Longifolius " ?

Veronica Anagallis L.
" Maddenii Edgw Limnophila reflexa
Hymenesia Indica Roxb
Ruellia Japonica Thunb
Dicliptera Chinensis Nees
Codonacanthus pauciflorus Nees
Rostellularia procumbens Nees
Ruellia
Verbena officinalis L
Lippia nodiflora ~~[illegible]~~ Rich
Callicarpa subpubescens H & A
" purpurea Juss 218
" tomentosa Willd 219
Clerodendron inerme R.Br.
" trichotomum Thunb
Vitex trifolia L
Premna integrifolia L
" glabra sp.n.
Calamintha gracilis Benth
var. Chinensis "
Scutellaria Indica L
" hederacea Kunth & Bouché
Anisomeles ovata Brown
Leucas Javanica Benth
Ajuga decumbens Thunb
Plantago major L
Statice Chinensis Girard?
Mirabilis Jalapa L
Nesaea insularis sp.n
Boerhaavia diffusa L

Chenopodium acuminatum Willd
Chenopodium australe Moq
Basella alba L
Celosia argentea L
Amaranthus spinosus "
Euxolus viridis Moq.
Achyranthes aspera L
" bidentata Blume
Iresine spathulata sp. n.
Rumex acetosa L
Polygonum japonicum Meisn
" Poiretii "
" Chinense L
" perfoliatum "
Cinnamomum pedunculatum Nees
Tetranthera japonica Spreng
Cassytha filiformis L.
[illegible] Wikstroemia retusa A. Gray
Thesium decurrens Blume
Elaeagnus tenuiflora Benth
Euphorbia ~~[illegible] Lam~~? halophila Miq
" serrulata Reinw
" pilulifera L
" palustris L
" helioscopia
" neriifolia L
acalypha ~~Euphorbia~~ Indica L.
Mappa Tanarius Spreng
Rottlera nervosa Sp. n
" Tinctoria Roxb

Rottlera japonica?
Phyllanthus urinaria L
Melanthesa Chinensis Blume
Glochidion obliquum Dne ?
" obovatum S. & Z.
Daphniphyllum Roxburghii Baill
Croton lepidocarpus sp. n. Buxus sempervirens L.
Bischoffia Javanica Blume
Antidesma Japonicum S. & Z. ?
Quercus cuspidata Thunb
" Championi Benth?
" salicina Blume
Myrica rubra S. & Z.
Sponia argentea Planch
~~Broussonetia papyrifera~~
Ficus Wightiana Wall
" No 291
" " 290
" Beechyana H & A? No 292
" nitida Thunb No 582
" No 288
" " 287
" venosa Willd No 293
Broussonetia papyrifera Vent
Morus Indica L
Antiaris? No 315
Pilea petiolaris Blume
" peploides H & A
Boehmeria densiflora H & A?
" No 303
Memorialis Dalzellii Wedd

Villebrunea frutescens Blume
Parietaria? No 301
Humulus Japonicus S. & Z.
Aristolochia Kaempferi Willd
Chloranthus brachystachys Blume
Chavica No 259
Peperomia " 263
" " 264
Houttuynia cordata Thunb.
Saururus Loureirii Dcne.
Ceratophyllum Juniperus taxifolia H & A Callitriche verna L
Pinus Massoniana Lamb
Podocarpus neriifolia R Br
Balanophora fungosa Forst B. indica [illegible]
Livistona Chinensis R. Br.
Areca saccharifera Labill?
Seaforthia sp?
Pandanus odoratissimus L
[illegible] hispidulum Blume
Arisaema Thunbergii "
" ringens Schott
Pistia stratiotes L
Lemna minor L
" polyrhiza
Halophila ovalis Gaud
Naias Indica Cham
Zannichellia palustris L.
Potamogeton pusillus L.
" crispus "
" rufescens Schrad
Monochoria vaginalis Presl
Enhalus acoroid Sagittaria Chinensis Sims

Liparis nervosa Lindl
Acerus longicornu Wr. (fid Dr Gr.)
Spiranthes australis Lindl
Microtis No 340
Goodyera " 337
Hellenia alba ~~Willd~~
Alpinia Allughas Roxb? 345 –
"

Aletris Japonica Thunb
Crinum Asiaticum L. Hypoxis minor Don 343
" No 344
Smilax China L

" " var glaucescens

" No 313
Peliosanthes? No 330
Flüggea Japonica Rich
Burmannia japonica Rom & Schult.
Dianella odorata Blume
Allium Thunbergii Don
Lilium longiflorum Thunb
Specimen wanting Asparagus Gaudichaudianus Kunth
Commelyna polygama Roth 347
Aneilema nudiflorum Br. 353
Tradescantia discolor Smith 349
Juncus effusus L
" xiphioides E. Meyer
Abildgaardia monostachya Vahl
Cyperus strictus Roxb
" difformis L 351
" umbellatus Benth 352
Kyllingia monocephala L 359

Eleocharis acicularis Br	857
Fimbristyles ambigua Steud	350
" rigida Kunth	358
Scirpus	360
" ciliatus Steud	356
" chinensis Munro	355
Carex Wahuensis Meyer	
" gracilis Brown & var	368 & 369
" Bongardii ~~Boott~~	370
" breviculmis Br.	364
" sociata Boott	361 & 366
" Ringgoldiana Boott	367
" rigens Boott	365
" pumila Thunb	362
~~Marsilea quadrifolia L~~	
~~Psilotum triquetrum Sw.~~	
~~Lycopodium cernuum L~~	
~~" gnidioides L~~	
~~Selaginella~~	~~no 371~~
~~" involvens Spring~~	
~~Marsilea quadrifolia L.~~	

Paspalum scrobiculatum L
Panicum platycarpum Trin
" sanguinale L.
" brizoides L
" ambiguum Trin
Oplismenus compositus Nees
Setaria viridis P. de B.
Gymnothrix Japonica (cenchroides) Kunth
Sporobolus virginicus Kunth
Polypogon Monspeliensis Desf
Cynodon dactylon Pers
Leptochloa tenerrima N. & Sol
Eleusine Indica L
Poa caerulea Steud
Eragrostis poaoides P. de B
" Zeylanica Nees
Lophatherum grande Brogn
Triticum caninum L
Zoysia pungens Willd
Pogonatherum saccharoideum P. de B
Erianthus Japonicus Nees
Eulalia densa Munro
" cotulifera "
Pollinia tenuis Trin
" nuda "
Batratherum submuticum Nees
Andropogon Martini Roxb
" montanus ~~Mont~~ Roxb
Psilotum triquetrum Sz
Lycopodium cernuum L

Lycopodium gnidioides
Selaginella No 377
" involvens Spring
Marsilea quadrifolia
Cheiropleuria bicuspis Presl
Woodwardia orientalis Sw.
Drymoglossum carnosum Hook
Lindsaea flabellulata Dry
Adiantum capillus-veneris L
Pteris longifolia L
" cretica "
" dispar Kunze
" E
" aquilina L
Asplenium lanceum Thunb.
" F
" G
" laserpitiifolium Lam.
" H
" Mertensianum Kunze
" K
Thamnopteris nidus Presl
Selliguea lanceolata Fée
" pedunculata Presl
" decurrens "
Niphobolus Lingua Spreng
Pleopeltis nuda Hook
" I
Phymatodes vulgaris Presl
Aspidium M

Ferns from Loo Choo Bonin Oosima &c.

Acrostichum bicuspe Hook. var integrifolia Eaton (Cheiropleura bicuspis
Woodwardia orientalis Sz.
Drymoglossum carnosum Hook
Lindsaea flabellulata Dryand.
Adiantum Capillus-Veneris Linn.
Pteris longifolia Linn.
Pteris cretica Linn.
Pteris dispar Kunze
Pteris quadriaurita Retz (Pteris E)
Pteris aquilina Linn.
Asplenium lanceum Thunb.
Asplenium macrophyllum Sz. (F Aspl. oxyphyllum)
Asplenium Wrightii Eaton (Aspl. G Katonasima)
Asplenium laserpitiifolium Lam.
Asplenium davallioides Hook. (Aspl. H (Darea ? sp)
Asplenium Mertensianum Kunze
Asplenium cystopteroides Hook. (Athyrium cystopteroides)
" " var elatius Eaton
Asplenium Schkuhrii Mett. (K Diplazium)
Asplenium Nidus Linn (Thamnopteris Nidus)
Gymnogramme lanceolata Hook. (Selliguea lanceolata)
Gymnogramme Wrightii Hook. (Selliguea pedunculata)
Gymnogramme decurrens Hook. (Selliguea decurrens)
Polypodium Lingua Sz. (Niphobolus Lingua)
Polypodium loriforme Hook. (Pleopeltis nuda)
" " " large form (L Pleopeltis sp)
Polypodium Phymatodes Linn. (Phymatodes vulgaris)
Aspidium pteropus Kunze (M Aspidium)

Aspidium falcatum Sz. (Cyrtomium falcatum)
Aspidium aristatum Sz. (Polystichum [illegible])
Aspidium molle ~~Sz~~ (Nephrodium molle)
Aspidium sophoroides Sz. (Nephrodium sophoroides ~~Sz~~)
Aspidium sophoroides Sz. (Nephrodium canescens)
Aspidium varium Sz. (Lastrea setosa)
Aspidium intermedium Blume (Lastrea propinqua)
Aspidium intermedium Blume var? (N Lastrea)
Aspidium uliginosum Kunze (O Lastrea)
Nephrolepis acuta Presl. (P. Nephrolepis § Lepidoneuron)
Nephrolepis tuberosa Presl.
Davallia strigosa Sz.
Davallia tenuifolia Sz. (Dav. Chinensis)
R. Cyathea spinulosa Wall.
Trichomanes radicans Sz. ("not to be determined" V. den Bosch.)
Trichomanes dissecta J. Sm.
Lygodium Japonicum Sz.
Schizea digitata Sz.
Osmunda Javanica Blume
Angiopteris evecta Hoffm.
Ophioglossum nudicaule L. f.?
Ophioglossum vulgatum Linn. (O. reticulatum)

Cyrtomium falcatum Presl
Lastrea setosa Eaton
" propinqua J. Smith?
" N
" O
Polystichum
Nephrodium sophoroides Desv.
" canescens Presl
" molle Schott
Nephrolepis tuberosa Presl
Davallia strigosa Sw
" Sinensis Sw
Trichomanes radicans Sw
" Q
Lygodium Japonicum Sw
Schizaea digitata Sw
Osmunda Javanica Blume
Angiopteris evecta Hoffm.
Ophioglossum nudicaule Linn f.
" reticulatum L.
& Cyathea R
Nephrolepis P
Polystichum braunitum Eaton

Clematis Meyeniana Walp. Pl. Meyen. 297
Benth. Fl. Hongkong, 6
Kotonasima Island

~~Euphorbia laevigata Lam (fide Engler) DC Prodr 15 part 2 p. 176 Loo Choo. The leaves in our specimen ~~alter~~ are all opposite & the lower ones appear to have been so the younger ones are fully as smooth as the lower nor is the ovary tomentose~~

Euphorbia halophila Miq. ann. mus. Bot. lu. III. p. 11 Boiss in DC. Prodr 15 p. 2 p. 13 Loo Choo

Euphorbia serrulata Reinw ex Blume Bij p. 635. Boiss in DC. Prodr 15. p. 2. p. 25. E. hypericifolia L.?

Euphorbia pilulifera Linn amoen. acad. 3, p. 114. Boiss in DC Prodr XV. p. 2. p. 21 Bonin & Loo Choo ~~&c~~

Euphorbia [illegible] Linn Sp. Pl. 622: Boiss in DC. Prodr XV. p. 2 p. 121

Katonasima & Kakeah I.

Euphorbia helioscopia Linn. Sp p. 658. Boiss in DC. Prodr XV. p. 2 p. 136 Kockiah & Agenhu Is.

Euphorbia neriifolia Linn. Hort. Cliff. p. 196. Boiss in DC. Prodr XV. p. 2. p. 79
Loo Choo?

Acalypha Indica. Linn Roxb. Fl. Ind. iii. 675. Wight. Ic. t. 877: Benth. Fl. Hong-Kong, p. 303
On banks, beside walls Loo Choo

Mappa Tanarius Spreng Miq. Fl. Ned. Ind. p. ii p. 401. Benth. Fl Hong-Kong p. 304

A small spreading tree Loo Choo

Rottlera nervosa Sp. n.

R Fruticosa foliis ovatis acuminatis basi obtusis quinquenerviis obasi quinquenerviis grosse denticulatis, petiolatis petiolo apice glandulifero paniculi floribus fasciculato-racemosis fasciculis masculis subtrifloris foemineis solitariis vel subbifloris fasciculis bracteis suffultis.

Oosima A slender bush. Fl reddish green

Rottlera tinctoria ~~R~~ Roxb. Fl. Ind. 3. 827

Pl. Corom. t. 168. Benth Fl. Hong Kong 307

Loo Choo A large spreading bush on shady hills

Rottlera Japonica S & Z Fl. Jap. p. 147 t. 77. A low spreading branched bush

Loo Choo. Ogenku, Kutonasima & Oosima Islands.

Phyllanthus Urinaria Linn Roxb. Fl. Ind. iii. p. 680. Benth. Fl. Hong-Kong. p. 310

In cultivated grounds Loo-choo

Melanthesa Chinensis Blume. Bijdr 592 Benth. Fl. Hong-Kong, p. 813

A slender bush in thickets Loo-Choo Oosima

Glochidion obliquum Dne pl. Timor

Loo Choo

Roadsides near the capital Berries red

Glochidion obovatum S. & Z. Fl. Jap. Fam. nat. p. 35

Kotonusima. A low much branched bush Fl. (stam) yellow. Ovarium 7-celled

Daphniphyllum Roxburghii Baill. Euph. 565, Benth. Fl. Hong-Kong. p. 316. Goughia Neilgherrensis Wight Ic. t. 1879 Loo Choo. Small. Kotonasima
A large spreading bush

Croton lepidocarpus sp. n

C. fruticosa. foliis petiolatis ovalibus ovali-lanceolatis obovalibusque basi subcomplicatis obtuse acuminatis: apiculatis supra glabris subtus ramulisque albido-lepidotis: floribus paniculato-racemosis.. paniculis foliis floralibus minoribus subaequilongis vel brevioribus. floribus fusco-lepidotis masculis superioribus carpellis lepidotis.. semine oblongo laevi fusco ecarunculato

A low bush among rocks Loo Choo

This is doubtfully referred by Hook & Arn. Bot. Beech. to C. polystachys Willd. a Brasilian plant it being well known that there was an unfortunate mixture of some of the plants described in this work Mexican plants being found among those from the Pacific Islands. The glands of the leaves are short perhaps sessile but hardly agree to the term "insculptis"

Buxus sempervirens L. Kakeu I.

Bischoffia Javanica Blume. Miq. Fl. Ind. Bat. 1, part ii p. 363. Benth. Fl. Hong-Kong. p. 316
A large bush or small spreading tree Loo Choo

Antidesma Japonicum S. & Z. Fam. Nat. Fl. Jap. ii. 88 Loo Choo. Leaves broader & shorter acuminate than in specimens fro (Hong Kong

Cupuliferae.

Quercus cuspidata, Thunb. Fl. Jap. 176; Sieb. & Zucc. Fl. Jap. ~~Fam. Nat.~~ 1, 8, t. 2.

Oosima & Tukunosima. A small spreading tree 10–15 feet high

Quercus Championi, Benth.? Insula Tanega I. The leaves have a few shallow teeth near the apex & the venation ~~of the leaves~~ beneath is indistinct or hidden by the lepidote scales. The gland is narrowly ovate 3 or 4 times as long as the shallow cup.

Quercus salicina, Blume, ~~307~~ Mus. Bot. Lugd.-Bat. 1, p. 305. Loo Choo Islands. ~~Loo Choo~~

~~Oo~~ Comparison with a sterile specimen named by Blume proves our plant to be Q. salicina (which probably was introduced into Japan from the Loo Choo Islands), and that it is entirely distinct from Q. glauca. The leaves are broader and rather white beneath than in Blume's specimen; they are verging to ovate-lanceolate, with a gradual and long acumination, 3 or 4 inches long, and the broadest nearly an inch wide near the base. Cupule of the same shape and structure as that of Q. glauca, but an inch in diameter; the acorn ~~an in~~ globular-ovoid, an inch long.

Celtideae.

Sponia argentea, Planch. in Ann. de Sc. Nat. 3d. Ser. Vol. 10, p. 323; Nutt. Am. 3, 404. Bonin Is. Hillsides. A tall branching shrub or small tree.

Ficus Wightiana, Wall. supra 289
In cemeteries at Loo Choo. A small spreading tree — the fruit growing from the stem and main branches above (in the axil of a small cortical protuberance (the base of the leaf?)

Ficus (Plagiostigma) sp.? 291
Bonin I.

Ficus (F. Mittellii aff.) 290
Bonin I. J. Small

Ficus Beecheyana, Hook. & Arn. Bot. Beech. 271? Miq. in Lond. Journ. Bot. 7, 437? 292
Loo Choo. A small bush 1-3 feet high, in shady woods. If our specimens which are very variable in the size of the parts belong to this species it must have been described from one of the smaller forms. The leaves of the larger ones are sometimes 7 or 8 inches long with 8-10 lateral veins on petioles nearly 2 inches & the ped~~icels~~uncles are nearly one inch long. The smaller forms have the leaves 2-4 inches & the peduncles 1/4 inch in length. The basal nerves hardly reach a fifth of the length of the leaf

Ficus nitida, Thunb.; Wight. Jc. 642.
Urostigma nitidum, Miq. Lond. Journ. Bot. 6, 582.

Amakerima Is. J. Small. A large, low tree, in thickets

Ficus (Pogonotrophe) foveolata. aff.

Loo Choo & Oosima. Creeping on rocks. Sepals oftener 3 than 4, unequal — in the bud whitish, the outer broadly cucullate the inner? — expanded narrow lanceolate, &c. 288

Ficus (Pogonotrophe)

Loo Choo. Roadsides near the capital. Pedicel (bracteolate) & base of 3-leaved perianth pubescent. Style short, from the apex of the ovary. Stigma short, rather thick, yellow. Sepals sub-unequal, linear-spatulate longer than the ovary. Receptacle pilose. 287

Ficus venosa, Willd. Hook. Beech. 36, t. 36. Covellia venosa, Miq. in Lond. Journ. Bot. 7, 468 293

Kakeak I. A small spreading tree. Fruit very much depressed and obtusely ribbed.

Morus Indica, Linn.; Thunb. Fl. Jap. 76; Wight, Ic. 674. Sieb & Zucc. Fl. Jap. Fam. Nat. 2, 95 294

Amakirrima I. J. Small. Loo Choo. Oosima.

Broussonetia papyrifera, Vent.; Sieb. & Zucc. l. c. 295

Loo Choo. A spreading bush 6-10 feet high.

Pilea peploides, var. B, Hook. & Arn. Bot. Beech. 96; Wedd. Monog. Urt. 179.

In damp places Amakirrima I. J. Small shady woods, Loo Choo. Harbor Is. in crevices of rocks. 302

petiolaris, Bl.

Pilea (P. lucenti aff.) p. 55 298

Loo Choo in shaded woods. Nearly allied to P. lucens but the internodes are very much longer and the nerves of the leaves terminate or diverge to the margin at least 2/3 of the length of the ~~leaf~~ blade.

Boehmeria densiflora, Hook. & Arn.? Wedd. Monog. Urt. 373?

Loo Choo. On steep banks. Our plant is monoecious — leaves inclining at least to dimorphism — (stipules more or less puberulent) the shorter often obtuse at the base and on a shorter petiole. The larger leaves are about six inches long & the petioles vary from 1/4 - 3/4 of an inch. 299

Boehmeria (B. macrophylla aff.) 303
Bonin I. (J. Small

The fruit in form & pubescence is like that of B. macrophylla. The pubescence & yellow cystolithes are also very much the same but the shape & size of the leaves are quite unlike & the (fruiting) spikes are strictly pendulous (no stam. flowers)

Memorialis Dalzellii, Wedd. Monog. Urt. 431. Pouzolzia integrifolia, Wight, Ic. 1977. 297

Loo Choo. J. Small

Debregeasia? 300

[illegible] [illegible], [illegible]

Mon. Urt. 455, Bull. Hb. H. K. 332. Ousima. Shaded mountain sides. A slender branching herb

Parietaria? 301

Loo Choo In shady woods & on walls. Fl. monoecious. Sepals 4, in stam. fl. equal — in pist. slightly unequal. Filaments about as long as the anthers. Seed hardly as long as the calyx covered with mucilage smooth whitish or fuscescent. Style very short — stigma papillose? Fr.

Humulus Japonicus, Sieb. & Zucc. l.c. 84; Seem. Bot. Herald, 412, t. 98.
Kikeai I. In hedges. 296

Urticacea Antiaris? 315

Fl. (masc.) in dense heads. 2 lines in diam. Perianth 4-leaved; sepals glabrous ~~obovate or~~ spatulate obtuse incurved at the apex with two yellow spots on the inside adjacent to the anther cells. Stam. 4 arising from the base of the sepals & shorter than the same. Anthers oblong fixed by the middle on filam. hardly half their length the lobes often unequal in size (from pressure or abortion?). ~~slightly emarginate — at the apex & deeply at base~~ at the apex slightly, at the base deeply emarginate, yellow. Pistil (rudimentary) about as long as the stamens linear subspatulate, pellucid, smooth.

Aristolochiaceae.

Aristolochia Kaempferi, Willd. Sp. Pl. 4, 152; Sieb. & Zucc. Fl. Jap. Fam. Nat. 2, 73.

Oosima. Shaded mountain sides, climbing to the height of 8–15 feet.

Chloranthaceæ

Chloranthus brachystachys, Blume, Chloranth. Fl. Jav. p. 13. t. 2. C. monander, R. Br. ined.? Sarcanda chloranthoides, Gardn. in Calc. Jour. 6. p. 348; Wight, Ic. t. 1946; Benth. in Kew Jour. Bot. 6. p. 116. Loo Choo Islands. (Vide. Jap. Coll. p.)

The specimens are in fruit; so it is not known whether the ~~plant~~ flowers are monandrous. But they resemble those from Hongkong.

Chavica ---- No 257
Oosima

Peperomia No 263 ~~Oosima~~
" " 264 Loo Choo

Houttuynia cordata Thunb Fl. Japon p. 234, t. 26

In rice fields Tanega J. Small

Saururus Loureiri Decne. in Ann. de Sci. Nat
1845 p. 102

Callitriche verna L. DC. Prodr. 3. p. 70. S. & Z. l.c.
p. 107
On wet grounds around ponds Loo Choo

Ceratophyllum demersum L. Willd. sp. pl. 4. p. 405
S. & Z. l.c. p. 107
In irrigated fields Loo Choo

Coniferæ,

Juniperus taxifolia, Hook. & Arn. Bot. Beech. 271; Endl. Syn. Conif. 17.
Bonin I. Tukunosima, Tanega I.
A feeble prostrate or procumbent shrub 4-6 feet long

Pinus Massoniana, Lamb.; Endl. l.c. 174; ~~Hook. & Arn. l.c. 27~~
Loo Choo. Common on all the hills a small tree with a spreading top when growing isolated.

Podocarpus neriifolius, R. Br.; Hook. & Arn. l.c.; Endl. Syn. Conif. 215.
Tukunosima. A small tree 20 feet high, also Loo Choo.

Balanophoraceæ

Balanophora ~~fungosa~~ indica, Forst. ~~J.D.~~
~~Growing on shaded hills~~ J. D. Hooker Gen. & Sp.
Balanoph. 46? 317.318

Growing, on shaded hills. Tanega I. growing on small roots. ~~Styles~~

Palmæ.

Livistonia Chinensis, R. Br. Prod. Fl. Nov. Holl. 268; Kunth, Enum. Pl. 3, 241
Bonin I. & Amakirima I.

Arenga saccharifera Labill.? Kunth, l.c. 3. 197?
Loo Choo. Single specimen with fruit only

Seaforthia
Bonin I. Palm 20–30 feet high. Panicles, verticillate in threes (with many (20–25) branches) beneath the crown of leaves. Leaves 7 feet long

Pandanus odoratissimus, Linn.; Kunth ~~Enum. Pl.~~ l.c. 3. 94.
Bonin I.

Araceae

(Rumphia, 1, p. 137, t. 31. 37.

Atherurus tripartitus, Bl.) ~~Japonica~~

Oosima. Shady mountain sides. 319

~~[illegible]~~

– Arisaema ~~Japonicum~~, Bl. Rumphia, 1, p. 106; Kunth l.c. 3, 19.

Oosima on mountain tops. In fruit.

Arisaema ringens, Schott; Blume, ~~Ru~~ Rumphia 1, 98; Kunth, l.c. 3, 17.

Harbor I.; Oosima. Spathe with alternate purple & yellow stripes on the inside widely hooded (inflated) and winged above. Anthers dark red in fours. 314

~~([illegible]~~

~~Halophila ovata, Gaud. in Bot. Voy. Freyc. 429.~~

~~Loo Choo in pools at & below ebb tide.~~

327

Pistia Stratiotes, Linn.; Kunth, l.c. 3, 8.

Loo Choo in ponds & irrigating ditches.

Lemnaceæ.

Lemna polyrhiza, Linn. *Spirodela polyrhiza*, Schlecht. in Linnæa, 13, 392; Kunth l.c. 3, 7.

Loo Choo. In irrigated fields. 325

Lemna minor, Linn.; Kunth, l.c. 3, 4.

Loo Choo in irrigated fields 324

Naiadaceæ.

Halophila ovata, Gaud. in Freyc. Voy. 429, t. 40.
Loo Choo in pools at & below ebb tide. 327

Naias Indica, Cham. supra.
Loo Choo in irrigated fields. 326

Zannichellia palustris, Linn.; Kunth l.c. 3, 124.
Loo Choo in stagnant water.

Potamogeton pusillus, Linn.; Kunth l.c. 3, 136; Cham. in Linnæa, 2, 174.
Loo Choo in irrigating ditches 321

Potamogeton crispus, Linn. Kunth. l.c. 3, 133; Cham. l.c. 2, 186, t. 5, f. 12.
Loo Choo in irrigated fields. Bracts orbicular or subreniform. 323

Potamogeton rufescens, Schrad.; Kunth, l.c. 3, 129.
Loo Choo in streams. Bracts broadly spatulate or triangular 320

Pontederiáceæ

Monochoria vaginata Presl. Supra.
Loo Choo. J. Small

Alismaceae

Sagittaria Chinensis, Sims; Kunth l.c. 3, 157. S. sagittifolia, Lour. Coch. 698.

Loo Choo, J. Small. With the brief description of Sims our plant agrees quite well & with that of Loureiro except that the flowers have three petals and that there are no scales about the ~~germ~~ ovaries and the expression "germinibus vestitis singulis squamis spathaceis," seems no way applicable to the fruit of any Sagittaria. The lower capitula are surrounded by a few stamens and the upper or at least the intermediate ones have some ovaries in the centre The filaments are longer than the anthers & dilated. Ovaries strongly falcate often with 1-3 coarse blunt teeth on the outer margin

Orchidaceae.

Liparis nervosa, Lindl. Orchidac. 26. Ophrys nervosa, Thunb. Fl. Jap. 27.
Loo Choo in woods. Flowers greenish red, segments deeper colored at the apex. Lips dark brownish red. Also found on Oosima.

342

[illegible]
Aceras angustifolia, Lindl, ~~Orch~~ l.c. 282.

Amakerima I. J. Small. Tukunosima, mountain sides. Flowers yellowish green. 338

Spiranthes australis, Lindl. Supra ~~Ooosima~~ Amakerima I. J. Small. Tukunosima on hills. Flowers pink. Aguni I. Flowers deep pink—lips paler.

Microstylis 340 Sepalis lanceolatis acutis revolutis; dorsali majore late ovato galeato acuto. Petalis late linearibus subfalcatis obtusiusculis. Labello anguste ovali obtuso basi bi-apiculato ~~trilobo~~ ~~tricallos~~ unicalloso. Clinandrio antice calloso apiculato. Folio lineari scapo longiore.

Goodyera rubicunda aff. 33

Glabrous except the rachis & bracts, the latter also glandular ciliate. Sepals ovate, petals obovate. Lip thick triangular fimbriate on the inside below the calli which are near the point slightly three lobed at the tip the middle lobe largest acute the lateral ones minute rounded Gynecium tubular (stamens & style forming a small tube) prolonged anteriorly into two acute teeth. Anther oval obtuse

Goodyera

Glabra, foliosa, foliis ovatis acutis viridibus albido-nervosis venosisque (nervis 6-8) petiolo lato 6-plo longioribus. Spica lanceolata multiflora, bracteis anguste lanceolatis acutis floribus brevioribus, sepalis ovalibus obtusis (lateralibus agglutinatis indistinctis) labello columnae basi adnato ovali supra 1-nervi infra 3-nervi nervis coccineis basi saccato, sacco intus glanduloso piloso vel fimbriato.

6-8 inches high slender leafy (leaves 6) ovate on petioles 1/4 inch long tapering into sheaths about the same length many nerved with irregular transverse veinlets, nerves & veins pellucid. Stem & spikes dull reddish.

[illegible] a single [illegible] [illegible]
[illegible] [illegible] only [illegible]

Zingiberaceæ.

Hellenia alba, Willd. Sp. Pl. 1, 5?
Oosima on hillsides. There is only a single fruiting specimen

Alpinia Allughas Roxb.?
Bonin I. In small bunches 3-6 feet high on hillsides. The specimens are in fruit. The upper surface of the leaves turns brown

Alpinia
Oosima I. Small. A single fruiting specimen much like the last but only 2½ ft high with smaller leaves & fruit on shorter peduncles Leaves green on both sides

Hæmodoraceæ.

Aletris japonica, Lamb.; Schultes, Syst. Veg. 7, 626; Gray in Perry's Jap. Exp. 2, 320. Amakirima I. J. Small. Takunozima I. Flowers pink

Amaryllidaceae

Crinum Asiaticum, Linn.; Kunth, Enum. Pl. 5, 547.

Bonin I. in an open ravine. Plant 4-7 feet high; larger leaves 4-5 feet long, 6-8 inches wide. Scape slightly compressed 2-3 feet long. Umbel 15-25 flowers. Flowers white - filaments & style pink at the tips. Ovarium indistinctly 3-angled. Fruit (immature) obovate compressed (by abortion 2-celled?) about the size of a hens egg with two seeds one much smaller than the other or only one - the smaller disappearing entirely.

Hypoxidaceae.

Hypoxis minor, Don. supra 343
Oosima on mountain tops. Flowers yellow

Hypoxis 344
Tukunosima. Flowers yellow.

Calyx pilose, outer segments 7-9n. inner 5-nerved. Stamens & thick style of equal length, half as long as the perianth. Anthers twice as long as the filaments. Capsule elongated lanceolate tapering to the base 5 lines long. Seeds convex at the hilum, concave on the back closely & strongly tuberculate (tubercles obtuse).

Smilaceae

~~S. [illegible]~~

Smilax S. China, Linn.; Kunth, Enum. 5, p. 243, ~~Japonica~~, Gray, in Perry's Jap. Exp. 2, 320. Coprosmanthus japonicus, Kunth, Enum. Pl. 5, 268?

Takunosima, on wooded sides of mountains.

Var. glaucescens; inermis? foliis magis acuminatis, ~~Smilax China, L. Sp. Pl. 1459; Willd. Sp. Pl. 4, 778; Kunth, Enum. Pl. 5, 243~~

Oosima, J. Small. ~~Takunosima~~. Climbing to the heights of 10 or 15 feet. 312

Smilax consanguinea. Coprosmanthus consanguineum Kunth, Enum. Pl. 5, 268

Oosima. Flowers dark purple, cells of the ovary with two ovules. ~~This~~ 313

Peliosanthes?

Loo Choo in shady woods near Shudi.

Perianth persistent (as in Ophiopogon) Filaments very short & anthers acute (as in Fluggea) Seeds ~~when~~ while quite young bursting the ovary, and becoming naked berries (as in Peliosanthes) Berries dark purple. Plant 2-3 feet high, leaves longer than the broad & thin scape

Liliaceæ

Flüggea Japonica, Rich.; Kunth, Enum. Pl. 5, 302; Gray, l.c.

Loo Choo on open rocky hills. The plants are in fruit & show the same structure as the preceding the ~~ovaries~~ ovules becoming distinct berries commonly one or two from each flower 330

Barnardia Japonica, Roem. & Schultes Syst. Veg. 7, 555? Kunth, l.c. 4, 337!

Loo Choo on open grassy ridges. Flowers light purple. The stamens are very slightly if at all inequilateral at the base & the spikes are hardly two inches long. 331

Dianella odorata, Blume; Kunth, l.c. 5, 57.

Amakirima & J. Smith. Takunosima on hillsides. Flowers purple.

Allium uliginosum Don; Hook. & Arn. Bot. Beechey, 272. A. Thunbergii, Gray, l.c. 322.

Loo Choo & Takunosima. Flowers greenish white. This can hardly be the plant of Don for the umbel is eminently bulbiferous, ~~& the scapes are leafy~~. 333

Allium Thunbergii, Don; Kunth l.c. 4, 541

Oosima. Mountain tops. Flowers purple. This agrees with the brief description. The scape is naked & the umbel few-flowered. Sepals oval obtuse 1-nerved. Stamens slightly exsert hardly dilated at base. edentate. Style exsert.

Lilium longiflorum, Thunb; Kunth Enum. Pl. 4, 266; ~~Em~~ Schultes, Syst. Veg. 7, 417. Loo Choo on hillsides. Flowers white 334

Asparagus Gaudichaudianus, Kunth, Enum. 5, p. 71, ex char. Oosima, running over rocks by the sea-side. A fruiting specimen only.

Commelynaceae.

Commelyna polygama, ~~Roxb~~ Roth.
Supra
Amakerrima I. J. Small, Loo Choo & Ugenku. 347

Aneilema multiflorum, Br. Prodr. 271; Kunth. Enum. Pl. 4, 66. 353
Loo Choo. Flowers blue.

Tradescantia discolor, Smith; Kunth, l. c. 4, 85; Lam. t. 226; Blanco, Fl. de Filipinas 232.
Loo Choo on hillsides at the base of cliffs forming large bunches. Fl. white. Probably introduced. The capsule in our specimens seems to perfect but one or sometimes two seeds in one cell those of the other two cells being abortive 349

Juncaceae

Juncus effusus, Linn.; Thunb. Fl. Jap. 145. J. communis, Kunth, Enum. Pl. 3, 320. 328

Takunosima in fields

Juncus xyphioides, E. Meyer. Supra 329
Takunosima in wet fields

Cyperaceae

Abildgaardia monostachya, Vahl. Supra Ugenku I.

Cyperus strictus, Roxb.; Kunth, Enum. Pl. 2, 12; Steud. Cyp. 8.
Loo Choo. Stamens about as long as the achenium.

Cyperus distans, Linn. Supra Bonin I. In the outlet of damp ravines. In thick patches. Larger in all its parts than the plant from ~~H~~ Hong Kong. 351

Cyperus umbellatus Benth ~~Mariscus umbellatus, Vahl.~~ Supra Bonin I. 352

Kyllingia monocephala, Linn. Supra Oosima [illegible]

Eleocharis acicularis Br. Prodr. 224; Kunth l.c. 2, 141. Chaetocyperus acicularis Steud. Cyp. p. 74
Oosima in rice-fields 357

Fimbristylis ambigua, Steud. Cyp. p. 117.
Bonin I. Summit of hills in small tufts. 358

Scirpus biflorus sp. n.

S. caespitosus foliosus, spiculis 5-plurimis congesto-paniculatis bifloris distichis squamis 3 inferioribus vacuis ovatis ~~obtusis~~ apiculatis superioribus majoribus oblongis ferrugineis vel fuscis, setis 5 achenium, ovalibus apiculatis albis longitudinaliter striatis angulis obtuse carinatis aequantibus.. Stamina 3. Stylo ad tertiam 3-fido achenio triplo longiore

On hills. Katonasma

A densely tufted plant about six inches high. Culms & leaves filiform Fl in two small almost sessile clusters one at the apex of the culm the other a little lower & subtended by a foliose bract & by two or more subulate ones about equalling the culm the upper one with a shorter bract Fls 2-ranked The 3 lower scales empty and increasing in size upwards ovate ~~obtuse~~ apiculate by the midrib the upper fertile ones lanceolate. Rachis strongly sinuose the nuts lying in the hollows oval apiculate 3-angular longitudinally striate thickened on the angles, whitish about as long as the 5 subplumose bristles Style 3-cleft to 1/3 or 1/4 3-4 times as long as the nut From the description it would seem to be near S. foliatus Hook. f.

Fimbristylis rigida, Kunth, Enum. Pl. 2, 231; ~~Steud. Cyp. 120.~~
Amakirrima I. fr. Small. 358

~~Rhynchospora~~ Scirpus biflorus sp. n. [illegible]

Scirpus ciliatus, Steud. Cyp. 86?
Takunosima in damp fields. Culms scattered. Achenia rounded on the back nearly flat on the inner face glaucous-red minutely punctulate obovate conspicuously apiculate with the base of the style nearly as long as the 6! strongly retrorse-hispid bristles

This appears identical with a Sandwich I. specimen in Herb. Gray (a small form of S. Meyenii?) except that our plant the short rigid dark brown involucre appear distinct from the culm below while in the Sandwich I. plant the panicle seems to grow from the culm proper near the apex. In other word, in our plant plant the panicle grows from the very apex of the culm & has a proper involucre, in the other it grows from the culm near the apex & has no proper involucre

Scirpus Chinensis, Munro. Supra Amakirima I. in ravines, J. Small much larger ~~in all its parts~~ than the Chinese plant with a more diffuse panicle.

Carex Wahuensis, Meyer; Cyp. nov. 24, t. 10. Spikes pale ~~sparingly~~ with a few staminate flowers at the apex; culm scabrous. Loo Choo in the cemetery among rocks.

Carex gracilis, Brown; Boott, Illustr. 57, t. 154, 155. C. brunea, Thunb.?

Perigynia smaller, 1-1 1/10 lines long. Loo Choo in small dense tufts near the cemetery.

Var. Perigyniis lanceolatis scabris 2 2/10 lines long, 6/10 line ~~wide~~ lat.; squama lanceolata obtusa vel acuta longioribus: Achenium 1 1/10 line long. oblongo-obovatum basi styli clavato. Culmo foliisque punctis ferrugineis conspersis. Bonin I.

In the lanceolate form of the perigynium & in the ferrugineous spots on the culm and leaves, it is like some specimens from the island of Bourbon & the peninsula of India & also specimens from the ~~peninsula of India~~ Sandwich Islands (C. Meyenii, Nees, fide Boott.)

~~[illegible]~~ though the perigynia ~~of~~ in these last are rough only at the margins

Bongardii, Boott, Linn. [illegible]

__Carex Wrightii__, __Boott.__ — Spicis 7 pallidis cylindricis elongatis erectis, terminali mascula sessili castanea, reliquis femineis crassis comosis subdimidiatim vel longius apice masculis pallide viridibus, suprema sessili mascula arcte contigua; inferioribus remotis basi attenuatis longe valideque exserte pedunculatis; bractea infima angusta culmo longiore, reliquis brevioribus demum setaceis spicis suis brevioribus, vaginis basi tumidis triquetris glabris; stigmata 3; perigyniis (immaturis) lanceolatis rostratis alte bicuspidatis glabris superne marginibus serratis arcte nervosis; squama lineari-oblonga truncata vel emarginata albo-hyalina longe hispido-aristata longioribus (arista) brevioribus. Bonin I.

Culm 2 feet high stout smooth 3-angled the upper fructiferous part more than a foot long. Leaves 2-5 lines wide longer than the culm tapering into a long setaceous point. Lowest bract $1\frac{1}{2}$ foot long $1\frac{1}{2}$ line wide), the Lowest ~~Sheath~~ one 21 lines long dull purple: below Sheaths 3-angled smooth with a tumid base Staminate spike 3 inches long 4 lines wide. Pistillate spike $2\frac{1}{2}$ inches long 4-5 lines wide. Scales all of the same shape. Perigynium $3\frac{8}{10}$ lines long $\frac{6}{10}$–$\frac{8}{10}$ of a line

broad the beak & segments serrate. Achenium oblong, enlarged at the base of the style or of the stigmas. Rachis linear about as long as the achenium.

From C. aristata of Brown & Boott, Illustr. 22, t 57, it differs in the single staminate spike in the pistillate spikes with staminate flowers at the apex in the truncate or emarginate scales & in the smooth leaves & sheaths.

Carex breviculmis, R. Brown, (vide supra p.); var. minor; spicis perigyniisque minoribus; foliis angustioribus. — C. discoidea, Boott in Mem. Amer. Acad. 6. p. 419. adn. Loo Choo Islands.

Cespitose stoloniferous. Culms 3-6 inches long triquetrous scabrous sharply angled the fructiferous portion from 2-7 lines long. Leaves half a line broad shorter than the culm. Bracts without sheaths, the lowest twice as long as the flowering part of the culm sometimes without flowers 4 to 5 lines below the spikes; the upper one a little longer than the spike in its axil or the culm Staminate spike 3-4 lines long, ½ line broad often short & inconspicuous. Pistillate spikes 2-3 lines long & broad. Scales all of the same form; Perigynium 7/10 line long 4/10 line wide. Achenium of the same shape 6/10 line long 4/10 line broad, dark brown.

Carex sociata, Boott. Spica subelongata e spiculis 6 pallidis oblongo-cylindricis, terminali mascula sessili, reliquis femineis ima basi parce masculis, superioribus masculae arcte contiguis, inferioribus paulo remotis exserte pedunculatis; bracteis spiculis suis brevioribus; vaginis subtruncatis scabris; Stigmata 3; perigyniis ovali-triquetris basi productis rostratis bidentatis valide nervatis pubescentibus pallide viridibus; squama oblonga truncata vel emarginata brevi hispido-cuspidata albida sequitata longioribus Loo Choo & Ousima.

Culm 5-16 inches high stout smooth leafy only ~~at~~ near the ~~very~~ base, the flowering part 3½--6 inches long. Sterile leaves 2-3 lines wide stout longer than the culm. Culm leaves short & narrow. Lower bract 1 line wide shorter than its own spike its sheath 8 lines long rather tumid slightly scabrous within. Peduncles 2 inches long rough. Spikes 6-10 lines long 1-2 lines wide. Scales of the staminate flowers broader pale ferruginous three-nerved in the middle cuspidate very obtuse; of the pistillate whitish the lower ones longer & somewhat pointed. Perigynium 1 4/10 line long 5/10 line broad. Achenium black 9/10 line long 1/2 line wide shortly stipetate (stipe white) 3-angled ~~black~~ with a ~~conspicu-~~ distinct ~~ously~~ white ring~~ed~~ at the apex surrounding the base of the style. Rachis very small 1 line long

From C. Chinensis this species differs in its achenia tumid on the sides not on the angles & distinctly ringed at the the apex, by the shorter inflorescence by the shorter ~~scales of the pistillate flowers by the broader~~ ~~shorter & broader shortly cuspidate~~ broader & shortly cuspidate scales of the pistillate flowers.. in the less divergent perigynia & the spikes not comose

Carex Ringgoldiana, Boott.

Spicis 4-5 cylindraceis erectis gracilibus, terminali mascula capillari inconspicua laxiflora sessili castanea femineis superioribus brevius reliquis femineis olivaceis superioribus 1-2 masculis arcte contiguis sessilibus vel insertis, inferioribus remotissimis laxifloris breve exserte pedunculatis,

infima subradicali;
bracteis foliaceis elongatis,
superioribus culmo paulo
longioribus; Stigmata 3; perigyniis
oblongo ovatis obtuse triquetris turgidis
acuminato tenuiter rostratis, rostro decolori,
ore leviter emarginato-bilobo ciliato, olivaceis
undique crebre nervatis; squama parva ovala
acuta mutica albida ciliata vel mucronata,
latioribus triplo longioribus. Cosima. Summit
of hills.

Culm 1½ foot high, slender, 3-angled, smooth or slightly scabrous at the top; the flowering part 3-9 or even 14 inches long. Leaves 2 lines wide, soft, grass-like, shorter than the culm. Bracts leaflike, with sheaths, all, except the upper one, longer than the culm, or the elongated lowest one shorter. Sheaths slightly scabrous under a lens 2-22 lines long sprinkled with colored dots. The lowest peduncle ½-2 inches long ~~slightly~~ scabrous. Staminate spike 6-12 lines long, 4-10 lines wide; scales pale castaneous, (nerve green) hyaline at the tip, obtuse, blunt, ciliate, lax. Pistillate spikes 8-18 lines long, scarcely ½ line wide, the lower ones 3-8 inches apart, all with staminate or sterile flowers at the very top. Perigynium 1 8/10-1 9/10 line long, 6/10-7/10 line wide, loosely inclosing the achenium. Achenium 8/10 line long, 5/10-6/10 line wide, oval, 3 angled, yellowish, punctulate. Base of the style not enlarged.

It has the habit of C. granularis Muhl.

Carex rigens, Boott.

Spicis 3-4 oblongo-cylindraceis approximatis erectis, terminali mascula subsessili saepe obliqua castanea basi attenuata, reliquis femineis fusco-olivaceis, superioribus masculae contiguis, infima subremota exserte pedunculata laxiflora; bracteis foliaceis culmo longioribus; stigmata 3; Perigyniis ovatis ventricosis obtuse triquetris rostratis glabris vel rostro parce dentato, ore membranaceo, albido bifido, laciniis scabris crebre valide nervatis fusco-olivaceis divergentibus; squama ovata acuta vel truncata longe valideque cuspidata albida, nervo viridi, lateralibus longioribus vel cuspide brevioribus. Cosima. Margin of rivulets.

Culm 1-1½ feet high, slender, rigid, strictly erect, acutely triangular, scabrous, leafy below; flowering part 1½-4½ inches long; Leaves 1½-2 lines wide, shorter than the culm. Bracts all longer than the culm, the lowest 2 lines wide, sometimes sterile & 4 inches below. Sheaths under a lens more or less scabrous, the lowest 8-16 lines long, acute-angled. Lowest peduncle 4 lines — 2½ inches long, scabrous. Staminate spike 9-15 lines long, 1 line wide; scales chestnut with a green nerve, truncate or emarginate, long cuspidate, ciliate, Pistillate spikes 6-12 lines long, 2-3 lines wide, the lowest 2-4 inches below the rest, pedunculate, exsert; scales all ~~acute~~ acuminate, acute, or the lowest often truncate, long cuspidate. Perigynium 1 9/10 line

long 7/10 - 8/10 line wide with ~~the~~ a beak 3/10 - 4/10 line long & whitish at the point, acutely bifid with the segments white & serrate, smooth or with the beak slightly dentate. Achenium 8/10 line long, 6/10 line wide, obovate, 3-angled, pale; Base of the style oblique, persistent.

Near to C. granulans, Muehl. from which it differs in its dark olivaceous, loose, bifid perigynia & longer beak. (Compare with C. transversa)

Carex pumila, Thunb.; Sch. k. r. F. J. 112; C. littorea, Labill. N. Holl. t. 219; Kunth Enum. Pl. 2, 592; (Boott in Perry's Jap. Exp. p. 2, 322

Loo Choo on sand beaches

Lycopodiaceæ

Psilotum triquetrum, Sw. Supra Bonin I. in shady woods.

Lycopodium cernuum. Linn. Supra Oosima, J. Small

Lycopodium gnidioides, Linn.; Willd. Sp. Pl. 5, 47; Hook. & Grev. Ic. Fil. t. 50. Oosima.
Our specimens agree with the figure cited in having acute leaves though they are described as obtuse

Selaginella involvens, Spring. Supra. Bonin I.

Selaginella

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Chara

Marsileacea.

Marsilea quadrifolia, Linn.; Willd. Sp. Pl. 5, 538; Thunb. Fl. Jap. 340.
Loo Choo, in irrigated fields.

Loo-Choo, Bonin, &c.

Ranunculaceæ

Clematis Meyeniana, Walp. Supra
Takunosima

Ranunculus Japonicus, Thunb.; DC. Prodr. 1, 29; Sieb. & Zucc. Fl. Jap. Fam. Nat. Sect. 1, p. 71; R. asiaticus, Thunb. Fl. Jap. 241.
Island Agenku. Branches procumbent. Flowers yellow

Ranunculus ternatus, Thunb. Fl. Jap. 241; DC. Prodr. 1, 31; Sieb. & Zucc. l.c.
Tukunosima. Beside rivulets. Flowers yellow

Ranunculus sceleratus, Linn.; DC. Prodr. 1, 34; Sieb. & Zucc. l.c.
Around ponds at Shudi.

Ranunculus diffusus, DC. Prodr. 1, p. 38; Hook. & Thom. Fl. Ind. 1, p. 36. ~~Island~~ Agenku, one of the Loo Choo Islands.
Exactly the Himalayan plant, although larger-fruited than in the specimens I have seen. The achenia are characteristic.

Schizandraceæ

Kadsura Japonica. S. & Z. Fl. Jap. 1, 40, t. 17 & Fl. Jap. Fam. Nat. 1, 80; DC. Prodr. 1, 83.

Oosima. Shrubby 4-8 feet high. Fruit red.

Menispermaceæ

Stephania rotunda Lour. Fl. Coch. 747.
Oosima Is. Climbing 8–12 feet high Flowers (stam.) green. Petals ~~3~~ 6.

Cocculus diantherus? Hook. & Arn. Bot. Beechey 167.
Loo Choo. A single small pistillate plant was procured.

Berberidaceæ

Nandina domestica. ~~Linn.~~ Thunb. Fl. Jap. p. 9 & 149. ~~Takusnosima~~; coll. by Mr. Boggs.
[illegible]

Fumariaceae.

~~Corydalis heterocarpa, Sieb. & Zucc. Fl. Jap. Fam. Nat. Sect. 1. p. 65; Walp. Ann. 4, 597.~~ [illegible] p. 307
~~Shaded hillsides, Bonin Island.~~

Corydalis racemosa, Pers. Syn. 2. p. 270; DC. Syst. 2. p. 125; Hook. & Arn. Bot. Beech. p. 258. Fumaria racemosa, Thunb. in Act. Petrop.; Willd. Sp. 3. p. 864. ~~Bonin Island~~ Corydalis heterocarpa, Sieb. & Zucc. Fam. Nat. Pl. Jap. 1. p. 65. Bonin Island; in shaded hillsides.

The same as the Japan plant, but in a more luxuriant state. The radical leaves are decompound and a foot or more in length, including the common petiole. Pods commonly an inch or more in length and (as flattened in drying ~~3 lines~~ nearly 3 lines wide.

Cruciferae.

Nasturtium atrovirens, DC.? Syst. 2, 201 & Prodr. 1, 139.
Loo Choo. Banks of irrigating ditches. Flowers yellow.

Capsella bursa-pastoris ~~Linn.~~ (Moench; DC. Prodr. 1, 177; Sieb. & Zucc. Fl. Jap. Fam. Nat. sect. 1, 62.
Kakeah Island. In fields.

Senebiera integrifolia, DC. Prodr. 1, 202
Loo Choo on sandbeaches by the sea shore. Probably introduced. Flowers greenish purple. Petals white?

Sinapis brassicata Linn.; DC. Syst. 2, 612; & Prodr. 1, 219.
Kakeah Island. In fields, common. Flowers yellow.

Raphanus Raphanistrum, Linn.; DC. Prodr. 1, 229 & Syst. 2, 666.
On sandbeaches, Loo Choo. In fields, Kakeah Island

Pittosporaceae

Pittosporum Tobira, Ait.; DC. Prodr. 1, 346; Sieb. & Zucc. Fl. J. p. 44; Hook. & Arn. Bot. Beechey, p. 168.

A bush 5 feet high & spreading. Cleopatra's Island. [illegible] J. Small

Pittosporum glabrum, Hook. & Arn. Bot. Beechey, 110; Walp. Rep. 1, 252.

A bush 10-15 feet high found in abundance at the Bonin Islands; also observed by Purser W. B. Boggs at Loo Choo. Fruit, apparently mature, in the dried state, hardly half an inch in diameter.

Stachyurus praecox, S. & Z. Fl. Jap. 1, 43, t. 18; Walp. Rep. 1, 258.; [illegible] l. c. 315

Oosima. A spreading bush 4-10 feet high. The specimens are all in fruit.

Violaceæ

~~Viola japonica, Langsd.; DC. Prodr. 1, 295. Loo Choo, Harbor Island; Tukunosima. Fl. very light purple with deeper lines.~~

Viola canina, Linn.; DC. Prodr. 1, 298; Sieb. & Zucc. l.c. p. 61.
Oosima, summit of hills.

Viola Patrinii, DC. Prodr. 1, p. 293. (vide supra, p.); var.? foliis cordato-hastatis, corolla imberbi. – Loo Choo, Harbor Island, ~~Kat~~ Kikai-sima, Tukunosima, &c.

The leaves differ from the Japanese specimens in having a pretty deep sinus; the spur varies considerably in length. Corolla pale purple, with deeper lines.

Droseraceæ.

Drosera Loureirii Hook. & Arn. supra Takunosima Hillside. Flowers light purple. Cleopatra & ~~[illegible]~~ uyeakerima Islands. J. Small.

Caryophyllaceæ.

(Larbrea aquatica St. Hil. ~~in DC. Prod. 1, 395;~~)

Malachium aquaticum, Fries; DC. Prodr. 1, 395; ~~[illegible]~~
Loo Choo. ~~Oomarck~~ Amakirima Island, J. Small.

Stellaria media, Smith.; DC. Prod. 1, 396. Island Agunku. In fields.

Arenaria serpyllifolia, Linn. DC. Prodr. 1, 411; Thunb. Fl. Jap. 186
Agunku in fields

~~Spergularia rubra, Pers. Arenaria rubra, Linn. DC. Prodr. 1, 401. Agunku, Amakirima Is. J. Small.~~

Sagina maxima, Gray, supina, β. ; var. caulibus suberectis ~~saep supne~~ saepe cum pedunculis calycibusque magis glanduloso-pubescentibus; foliis acutatis. — Agunku and Amakirima, Loo Choo Islands.

Clusiaceæ

Calophyllum inophyllum, Linn.; Hook. & Arn. Bot. Beechey, 260; DC. Prod. 1, 562.

Loo Choo & Bonin I.

Actinidia rufa. Trochostigma rufa & T. arguta, Sieb. & Zucc. in Act. Acad. Monac. n. ser. 3. p. 727.

~~Lukun~~osima and Ousima, north of the Loo Choo Islands.

Scandent; flowers white. The male plant only. (See Japan Coll. p. .)

Cf. [illegible] [illegible] [illegible]

Ternstroemiaceae.

Schima Noronhae. Reinw. in Verh. ~~Verhand.~~ Verhandl. 143, t. 29; Blume, Bijdr. 127; Walp. Rep. 5, 135.

Bonin Is. A large rigidly erect bush 8–12 feet high

Camellia japonica, Thunb. Walp. l. c. 809 Supra.
~~Bonin~~. Oosima.

Camellia sasanqua, Thunb. Fl. Jap. 273, t. 30; DC. Prodr. 1, 529

Oosima. A bush. 4–8 feet high. Loo Choo & Komisang Is. J. Small.

Eurya japonica, Thunb. (l. c., & var. chinensis. ~~Supra~~ ~~Supra.~~

Tukunosima, Loo Choo, Oosima & Tanega Islands Loo Choo, J. Small, Some specimens are nearly intermediate between ~~E.~~ E. japonica and E. chinensis.

Ternstroemia japonica, Thunb. in Linn. Trans. 2. p. 325; Sieb. & Zucc. ~~Fl.~~ Fl. Jap. 1. p. 148. t. 80. ~~Supra~~

Tukunosima I.

Trochostigma argutum, Sieb. & Zucc.; ~~Fl. Jap. Fam. Nat.~~ 1. Walp. Rep. 5, 131

Takunosima & Oosima I. Scandent. Staminate flowers white. Pistillate plants not observed.

Malvaceae.

Urena morifolia, DC.; Sieb. & Zucc. l.c. p. 58.

Loo Choo in shady woods. Calyx segments strongly 5-nerved & larger than in U. lobata.

Hibiscus rosa-sinensis, Linn.; DC. Prodr. 1. 448.

Amakirrima Islands. A shrub 4 feet high. Fl. crimson. J. Small.

Hibiscus mutabilis, Linn.; Thunb. Fl. Jap. 272; Sieb. & Zucc. l.c. p. 58; DC. Prodr. 1. 452.

Loo Choo. A small spreading tree 10-15 feet high. Flowers light pink.

Abelmoschus moschatus Moench; Wight & Arn. Prodr. 53.

Loo Choo in the cemetery. Flowers yellow.

Hibiscus tiliaceus. Linn

Paritium tiliaceum, St. Hil.; Hook. & Arn. Bot. Beechey, 259.

Bonin Islands. A large bush 6-10 feet high. Flowers yellow

Paritium

Sida alba, Linn.; Hook. & Arn. Bot. Beech. 259; Wight & Arn. Prodr. 58.
Loo Choo. Flowers yellow opening in the daytime.

Abutilon Indicum, Don; Wight & Arn. Prodr. 56. Sida Indica, Linn. DC. Prodr. 1, 471.
Bonin Island. Suberect 2-3 feet high, ~~[illegible]~~ branching. Flowers yellow.

Thespesia populnea, Corr.; DC. Prodr. 1, 456; Wight, Ic. t. 8; Gray, Bot. Exp. Exp. 1. 179.
Loo Choo. A small spreading tree on open hills. Specimens in fruit.

Tiliaceæ.

Elaeocarpus Japonica, Sieb. & Zucc. Fl. Jap. Fam. Nat. 1, 57; Walp. Ann. 1, 957; E. Japonicus? Zoll. & Cumm. Walp. Ann. 1, 112.

A bush 4-8 feet high. Flowers greenish white: Tukunoshima Island. Kornisang Is. J. Small.

Elaeocarpus photiniaefolius, Hook. & Arn. Bot. Beechey, 257; Sieb. & Zucc. l. c. 156; Walp. Rep. 1, 363.

Bonin I. A large bush 5 feet high. Fruit very dark green.

Elaeocarpus photiniaefolius Hook & Arn
var. parvifolia foliis minoribus

Polygalaceae.

Polygala Japonica, Houtt.; DC. Prodr. 1, p. 324; Gray, in Perry ~~Botany of~~ Jap. Exp. 2, p. 318.
Amakerima ~~Islands, J. Small,~~ Takunosima, and Agenkin, Loo Choo Islands.

Sapindaceæ.

Cardiospermum Halicacabum, Linn.; DC. Prodr. 1. 601.

Loo Choo on open rocky hillsides.

Sapindus Mukorossi, Gaertn.; DC. Prodr. 1. 609; Sieb. & Zucc. Fl. Jap. Fam. Nat. 1. 44; Lam. t. 307.

Bonin I. A large bush 5-10 feet high. The leaves in our specimens are much narrower than those of ~~[illegible]~~ plants in herb. Gray and very unequal-sided. They answer pretty well to the figure in Lamarck.

Meliosma rigida, Sieb. & Zucc. Fl. Jap. Fam. Nat. 1. 45; Walp. Ann. 1. 163.

Oosima. A small sparingly branched tree. Flowers white.

Aceraceae.

Acer oblongum, Wall.; DC. Prodr. 1, 593; Acer laurifolium, D. Don, Prodr. Fl. Nep. 249. A. niveum? Blume.

Loo Choo. A large spreading tree 50 feet high with crooked branches.

Staphyleaceæ.

Turpinia arguta, Seem. supra.
Loo Choo

Turpinia Nepalensis, Wall. supra
Loo Choo & Ousima. Amakesima I., J. Small.

Euscaphys staphyleoides, Sieb. & Zucc. Fl. Jap. ~~Fam. Nat.~~ 1, p. 124, t. 67; Fl. Jap. Fam. Nat. 1, 43; Walp. Rep. 2. 826.
(Takunosima I. (Tomisang I. J. Small)

Shrubby, erect, 4-8 feet high, widely branching. Flowers greenish.

Aurantiaceae.

Citrus Aurantium, Linn.; Wight & Arn. Prodr. Fl. Ind. 97; DC. Prodr. 1, 539;
Amakerima Islands, J. Small. Loo Choo

Murraya exotica, Linn.; DC. Prodr. 1, 537; Hook. & Arn.! Bot. Beechy, 260
Loo Choo.

Olacaceae

Schoepfia No. 236

~~p. 11~~ Schoepfia jasminodora S. & Z. ~~H. Jap. sel. 2~~

Fl. Jap. fam. nat. sectio 2. p. 11

Kotonasina Erect branching Fr. yellow

Hillsides

Vitaceæ.

Vitis Japonica, Thunb.

Vitis Japonica ~~Cissus japonica~~, ~~Willd.~~; DC. Prodr. 1, 632; Sieb. & Zucc. Fl. Jap. Fam. Nat. ~~l.c.~~ 87. Vitis japonica, Thunb. Fl. Jap. 104.

Yakunosima shaded mountain sides. Scandent 10-20 feet high. Flowers greenish, purple.

Vitis Thunbergii, Sieb. & Zucc. l.c. 95.

Oosima, Collected by J. Small.

Same as the Japan plant; and apparently the same as V. Labrusca Linn.

Oxalidaceæ.

Oxalis corniculata, Linn.; Hook. & Arn. Bot. Beechey, 261. [illegible]
Bonin Is. Loo Choo.

Geraniaceæ.

Erodium Moschatum, Willd.; DC. Prodr. 1, 647.

Los Choros. A single specimen only was obtain
apparently introduced.

Zanthoxylaceae.

Zanthoxylum ailanthoides, Sieb. & Zucc.; Fl. Jap. Fam. Nat. 1, 30; Walp. Ann. 1, 965.

Bonin I. in rocky ravines. A large branching bush 10-15 feet high. The specimens have no spines on the small portion of stem to which the leaves are attached

Zanthoxylum Avicennae DC. supra
Oosima. A bush 2-3 feet high.

Zanthoxylum pterotoides ?

Bonin , I small

Boodia Zanmkama Benth
~~Zanthoxylum pteleaefolium~~? Champ. supra
Loo Choo. In thickets. Flowers white; stamens 8; those opposite the petals shorter and their anthers cordate & somewhat apiculate (prolonged connective?)

Toddalia aculeata, Pers.; Wight & Arn. Prodr. Fl. Ind. 149; Hook. & Arn. Bot. Beechey, 261

Loo Choo, Hillsides. A widely spreading subscandent bush 2-6 feet high. Flowers greenish yellow

Acronychia

Bonin I. The specimens are in fr. & cannot well be referred to any described species. They accord well with a specimen fr. New South Wales in Herb. Gray in young fr & likewise unnamed.

Celastraceæ.

Euonymus Japonicus, Thunb. Fl. Jap. p. 100; Hook. & Arn. Bot. Beech. p. 261, t. 54. Bonin Islands; ~~the small-leaved form, like that collected in Beechey's voyage and figured by Hooker and Arnott.~~ Loo Choo Islands.

A branching bush, 3 to 5 feet high; in fruit. The plant from the Bonin Islands is the same as that gathered in Beechey's voyage and figured by Hooker and Arnott. That from the Loo Choo Islands accords with our Japan specimens, and has the leaves two or even three inches in length and of a thicker texture. Otherwise there is no essential difference.

Celastraceæ.

~~Euonymus Japonicus, Thunb. Fl. Jap. 100; Sieb. & Zucc. Fl. Jap. Fam. Nat. 1, 43; DC. Prodr. 2. 4; Hook. & Arn. Bot. Beechey, 261.~~
~~Bonin I.~~
~~A branching shrub. 3–5 feet high. In fruit~~

~~Euonymus~~

Euonymus echinatus. Wall
ovaries echinate
Oosima. Near the beach. A branching bush

Celastrus articulatus, Thunb. Fl. Jap. 97; ~~Sieb.~~ DC. Prodr. 2, 7; Sieb. & Zucc. l. c.; Gray, l. c.
Tatunnosima L. Subscandent 4–6 feet high. Flowers white — petals denticulate.

~~Celastrus.~~ Catha diversifolia, sp. n.

Armata, glabra, foliis spathulatis obovatis subintegerrimis v. crenulatis subrepandis utrinque denticulatis, spinis subangulosis [illegible] ramulis foliis brevioribus, pedunculis pedicellisque gracilibus, floribus minutis, capsulis bilocularibus (loculo altero abortivo?) (A low branching shrub. Flowers white & subpolygamous? [illegible] broad flattened

Rhamnaceæ.

Berchemia lineata, DC. supra.
Loo Choo. A low branching bush. Fruit red.

~~Rhamnus crenatus? Sieb. & Zucc. Fl. Jap. Fam. Nat. 1, 38.~~
~~Ousima, J. Small. Loo Choo. A large spreading bush 8-12 feet high. Our specimens have the veins of the leaves fewer than in the description above quoted and rather strongly curved. The pedicels & base of the calyx are smooth and the common peduncle wanting.~~

Rhamnus virgatus. Roxb. Fl. Ind. 2. p. 351. Ousima, (~~J. Small) and Loo~~ J. Small.

The specimens are in fruit; drupe 3-5-seeded; seeds grooved on the back. This is near R. catharticus, and therefore probably R. virgatus of Roxburgh. A.

Anacardiaceæ

Rhus succedaneum, Linn. supra Loo Choo. Kōnisang Island, J. Small,

Meliaceae.

Melia Azedarach, Linn. Wight & Arn. Prodr. 117; DC. Prodr. 1.621.

Bonin Is., common & apparently indigenous.

~~Tanega Is. J. Small~~

Leguminosae.

~~Chinensis, Benth. in~~

Thermopsis ~~fabacea, DC. Prodr. 2, 99; Gray, Botany of Japan Exped. 310.~~

Oukeah I. On coral rocks near the sea. The stipules are remarkably narrow, being 8-10 lines long & only ~~from~~ 2 or 3 broad, and the calyx more deeply cleft than in T. fabacea. Fruit not seen.

Medicago lupulina, Linn.; DC. Prodr. 2, 172.

Oukeah & Agenhu Is. In sands near the seaside. Flowers yellow.

Melilotus leucantha, Koch.; DC. Prodr. 2, 187.
Indica Allioni ex Boiss

Loo Choo. Oukeah I. On sandbeaches by the seaside. Flowers yellow.

~~Melilotus~~

~~Astragalus lotoides, Lam.;~~ DC. Prodr. 2, 282; Sieb. & Zucc. l.c.

Tanegasima, J. Small. There is no reason apparent why De Candolle should have attributed to Lamarck the substitution of the specific name lotoides for sinicus, as that word is not employed at the ~~le~~ place cited. It would appear, as indicated by ~~Pers~~ Persoon, that it should have been called A. umbellatus

Ormocarpum sennoidis, ~~DC.~~ Prodr. 2, 315; Miq. Fl. Ned. Ind. 1, 28; Wight & Arn. Prodr. Fl. Ind. 216. [illegible]

Komisang Island, J. Small. The specimens are in fruit – the legumes strongly ~~veined~~ nerved but otherwise smooth.

Desmodium podocarpum, DC. Prodr. 2, 336.

Loo Choo in woods near the capital. Flowers light purple.

Lespedeza cuneata, G. Don; ~~DC.~~ Hook. & Arn. Bot. Beechey, 262

Loo Choo Open hillside, around fields.

Vigna luteola

~~Dolichos Lablab~~ ~~says~~ [illegible]

~~Lablab cultratus~~, DC. Prodr. 2, 402; Sieb. & Zucc. Fl. Jap. Fam. Nat. 1, 10.

Amakirima Island, J. Small. Loo Choo On sand banks near the seaside

Lablab perennans, DC. Prodr. 2, 402;

Loo Choo. By roadsides, climbing over bushes. Flowers white – the wings becoming light yellow. Our specimens agree with the figure in Rumphius 5, t. 137 in its short racemes, & with the description in Loureiro p. 534 except that the petioles & stem are slightly pubescent.

D. [illegible] Lablab,
Lablab vulgaris, Savi; DC. Prodr. 2, 401; Sub. d [illegible].

Bonin Islands. Flowers greenish white with a yellowish tip.

Mucuna gigantea, DC. Prodr. 2, 405; Wight & Arn. Prodr. 254.

Bonin Islands. Climbing over high bushes. Flowers light greenish with a tinge of purple.
[illegible]

Derris uliginosa, Benth in Pl. Jungh. 252 Supra. B. Forsteri.

Loo Choo. A feeble shrub 6–8 feet high ascending among bushes.

Derris ——— sp.? Oosima

Chinese [illegible]
Pongamia glabra, Vent. Supra.
Amakerima I. J. Small. Loo Choo a small widely spreading tree, Flowers purple.

Guilandina Bonduc, Ait. Supra.
Bonin Islands.

[illegible] 2, 401

Rosaceæ.

Prunus macrophylla, Sieb. & Zucc. ~~Fl.~~ Fl. Jap. Fam. Nat. 1, 14; Walp. Ann. 1, 271.
Loo Choo in woods at the Capital, a small tree about 15 feet high. Flowers white.

Rubus triphyllus, DC. Supra
Amakerrima I., J. Small, Oosima & Takunosima. Flowers white. Fruit light orange juicy & well-flavored. Bracts & calyx coarsely toothed.

Rubus parvifolius, Linn.; DC Prod. 2, 564; Sieb. & Zucc. l.c.
Loo Choo & Takunosima. Prostrate or procumbent. Flowers light purple. Fruit scarlet.

Rubus rosaefolius, Smith; DC. Prod. 2, 556. R. Thunbergii, Sieb. & Zucc. l.c.
Oosima, Ugeniku, Takunosima. Amakerrima I., J. Small.
Very variable in the number & size of the leaflets. Flowers white, fruit purple globose.

Rubus 79 see

Rubus bracteosus (sp. nov.): caulibus fruticosis adscendentibus petiolisque tomentosis parce aculeolatis; stipulis cuneato-lanceolatis laciniato-multifidis (a petiolo liberis) deciduis; foliis ovato-rotundis subcordatis sublobatis inciso-dentatis supra mox glaberrimis laevibus subtus albido-tomentosis (reticulatis); floribus ~~axillaribus~~ magnis in axillis solitariis binisve subsessilibus pluribracteatis; bracteis sepalisque obovatis seu ovalibus obtusissimis sublaciniato-dentatis utrinque cano-tomentosis. A.G. — Oosima, Katonasima, and Amakerima, Loo Choo Islands; on shaded hill-sides.

Petals white. Fruit light orange, juicy, and well flavored. Stems 4 to 5 feet high. — Apparently a very distinct species of the section to which R. Moluccanus, Linn., belongs; well marked by the size of the almost

Rubus incisus, Thunb.; var. integrifolius: procumbens, fere inermis; foliis ~~rotu~~ subcordatis ~~rotun~~ rotundatis vel majoribus ovatis oblongisve duplicato-serratis raro subincisis; calyce extus glabro, lobis magis aristato-acuminatis.) — Ousima and Katanosima, ~~north~~ of the proper Loo Choo Islands; on shaded hillsides. Fruit light orange, rather acid, but well flavored.

This is evidently a form of Thunberg's R. incisus, ~~the petals~~ although the leaves show only faint traces of lobes. The petals have all fallen. Fruiting calyx an inch in diameter when expanded. Fruit large, of very many grains.

Photinia arbutifolia, Lindl. Pomac. & Bot. Reg. t. 491; Torr. & Gray, Fl. 1, p. 473. Bonin Islands; in thickets, on hill-sides; with young fruit.

Except that the inflorescence is glabrous (and it is glabrate in many Californian specimens), nothing appears to distinguish this [illegible] plant from the N. North American Photinia arbutifolia!

Rhaphiolepis Japonica, Sieb. & Zucc. Fl. Jap. 1, p. 162, t. 85. (R.? integerrima, Hook. & Arn. Bot. Beech. p. 263.) & R. Mertensii, Sieb. & Zucc. l.c.?) Katonasima, and Bonin Islands; in flower and in fruit.

The specimens from the Bonin as well as the Loo Choo Islands are not to be distinguished from the Japanese species. The mature fruit is globose. ~~It can~~ There is little doubt that Hooker and Arnott's R. integerrima was founded on an imperfect specimen of this species with only forming fruit. And the same may probably be said of Siebold and Zuccarini's R. Mertensii, from the same islands; unless the character "fructibus ellipticis" relates to full-grown fruit. The only ~~character~~ peculiarity of the Bonin specimens is, that the lobes of the calyx are broader and shorter, sometimes broadly ovate; but little reliance can be placed on this.

N.B. Bentham says that R. integerrima; diff. in fruit; [illegible]

Rhaphiolepis Indica, Lindl. incl. R. rubra & R. phaeostemon, Lindl. Coll. t. 3. Makerima, Loo-Choo Islands.

Eupatoria, Linn., var. A.

Agrimonia viscidula, Bunge, Sieb. & Zucc. l.c.; Walp. Rep. 2, 41. = E. Eupp. & Bush | [illegible]

Loo Choo. In fields cultivated or introduced? Flowers yellow.

Rosa Indica, Linn.; DC. Prodr. 2, 600. Loo Choo. Flowers crimson. Specimen collected by Mr Boggs.

Rosa sempervirens, Linn. var. microphylla, ~~pimpinellifolia, Linn.? DC. Prodr. 2, 608; Sieb. & Zucc. l.c.~~ DC. Lindl.

~~Tanega Island, Takunosima. Flower white.~~

Agenhu and Katonasima, Loo Choo Islands.

~~Rhaphiolepis Japonica, Sieb. & Zucc. Fl. Jap. 1, 162, t. 85. R. integerrima, Hook. & Arn. Bot. Beechey 263.~~

~~Takunosima, Tanega, Amakerima & Bonin Islands. A large spreading bush.~~

Osteomeles anthyllidifolia, Lindl.; DC. Prodr. 2, 633; Sieb. & Zucc. Fl. Jap. Fam. Nat. 1, 23.

Agenhu & Bonin Islands. A low spreading nearly prostrate bush. Flowers white. Accords well with the ~~Sa~~ plant of the Sandwich Islands.

Potentilla reptans, Linn.; Lehm. Rev. Pot. p. 183; var. foliis omnibus trifoliolatis. Road-sides, Loo Choo Islands.

We have the same thing from Hakodadi, Japan.

Fragaria (Duchesnea) Indica, Andr. Bot. Rep. t. 475. Takunisoma,

Combretaceæ.

Terminalia Catappa, Linn.; DC. Prodr. 3, 11; Hook. & Arn. Bot. Beechey, 263; Gray, l. c., 614. Bonin Islands, on hillsides, & by the margin of the bay. A large Tree. Flowers white.

Lythraceæ.

Pemphis acidula, Forst. Char. Gen. t. 34; Lam. Ill. t. 408; DC. Prodr. 3. p. 89. South Point, Loo Choo Islands.

Onagraceae.

Jussiaea octofila, DC. Prod. 3, 57.
Los Olivos, (around ponds) and on the banks of irrigating ditches.

Melastomaceæ.

macrocarpum, Don [illegible]
Melastoma ~~candidum~~ D. Don, Supra,
M. Malabathricum?

Loo Choo, In shady woods near Shudi; A bush 2-4 feet high.

Syzigium cuneatum sp. n.

Foliis oblongis obovatisve basi attenuatis obtuse acuminatis subcoriaceis impunctatis, venis nervo marginalique indistinctis pedunculis 1-3 terminalibus axillaribusque foliis brevioribus baccis globosis ore calycino 4-dentato coronatis

Bonin I. A bush 6 feet high in fruit J. Small

Syzigium Bonninense sp. n.

Foliis ovalibus subcoriaceis obtuse acuminatis basi apiceque subcomplicatis penninerviis ~~veniis~~ nervoque marginale indistinctis impunctatis. Paniculis axillaribus terminalibusque foliis brevioribus baccis globosis ore magno magno dilatato coronatis lobis calycinis latis rotundatis sub margine disci crassi insertis

Bonin I A large bush or small tree J Small

[illegible]

Eugenia 85—

[illegible]

Eugenia 86

[illegible]

Cucurbitaceae.

No. 87 Momordica? [illegible] [illegible]

Zehneria, ~~Baueriana, Endl. Prodr. Fl.~~
~~Norf. 69.~~ Tube of corolla [illegible]

Loo Choo: also on Ousima, J. Small.
Flowers white

Bryonia laciniosa, Linn.; DC. Prodr. 3, 308;
Wight & Arn. Prodr. Fl. Pen. 345;

Koumisang Island, J. Small. Flowers greenish-yellow. Fruit marked with white spots, J. S.

Trichosanthes cucumerina, Linn.; DC. Prodr. 3, 315; Wight & Arn. l.c. 350; Sieb. & Zucc. Fl. Jap. Fam. Nat. 2, 60.

Bonin I. Climbing over trees in thickets. Flowers (male) greenish-yellow.

Lagenaria [illegible] [illegible] [illegible]
3, 299.

Bonin I. [illegible] [illegible] [illegible]
[illegible]

[illegible]

[illegible] [illegible]

Petals [illegible] ~~[illegible]~~ cond[illegible]
[illegible] [illegible] glan[illegible] [illegible]

Crassulaceæ.

var.?
Kalanchoe spathulata, DC. Prodr. 3, 395.
Amakerrima Is. J. Small. On walls at Shudi. Loo-Choo. Flowers yellow.

Sedum Formosa [illegible]

Loo-Choo Amakerrima. [illegible]

Sedum 91 "aff. S. [illegible] from the island."

Loo Choo [illegible]

Portulacaceæ.

Portulaca oleracea, Linn.; DC. Prodr. 1, 353.

Bonin I. J. Small.

Portulaca quadrifida, Linn.; DC. Prodr. 3. 354.

Bonin I. Growing in crevices of rocks on hillsides in very dry places.

Tetragonia expansa, Ait.; DC. Prodr. 3. 452; Sieb. & Zucc. l.c. p. 57.

On Sand beaches, Loo Choo.

Sesuvium portulacastrum, Linn.; DC. Prodr. 4, 453.

Loo Choo, on rocks at high-water mark.

Saxifragaceæ.

p. 19, t. 6.
(Deutzia crenata ~~gracilis~~) Sieb. & Zucc. Fl. Jap. 1, ~~22~~
~~t. 8; Walp. Rep. 2, 152~~
Oosima. J. Small.

Deutzia scabra, Thunb. Fl. Jap. p. 185; Sieb. & Zucc. Fl. Jap. 1, p. 20, t. 7; DC. Prodr. 4, 16; Gray in Perry's Jap. Exp. 2, 312.
(A low spreading bush. ~~Flowers white~~
Oosima & ~~Fukuno sima~~ Katonasima)

~~Hydrangea Hortensia~~, DC. var.
~~Cleopatra Island.~~

Hydrangea Hortensia, DC. & var. acuminata (H. acuminata & H. Bürgeri, Sieb. & Zucc. Fl. Jap. 1, p. 110, t. 56, 57. — Cleopatra Island. J. Small.
The specimens of the var. acuminata grew in mountain ravines. The other form may have been cultivated.

Itea Chinensis, Hook. & Arn. Bot. Beech. p. 189, t. 39; Hook. f. & Thoms. Præcur. Fl. Ind. in Proceed. Linn. Soc. 2, p. 77. Loo Choo Islands.
Leaves smaller and blunter, and racemes longer than in ~~the~~ Chinese specimens.

Hamamelideae

Distylium ellipticum 174 Sp. n.

Folia elliptica basi abrupte ~~attenuata~~ angustata petiolata in axillis nervorum subtus foveata. fructus maturo folio dimidio breviore

Bonin I.

Umbelliferæ.

Hydrocotyle nitidula, Rich.; Hook. Ex. Fl. 1, t. 29; DC. Prodr. 4, 66.
Loo Choo Damp shady places.

Hydrocotyle rotundifolia, Roxb. Supra.
Loo Choo. On shaded banks.

Hydrocotyle Asiatica, Linn. Supra.
Loo Choo, Bonin I. In damp ground. The specimens are quite smooth.

Cryptotaenia Canadensis, DC. Prodr. 4, 119; Sieb. & Zucc. Fl. Jap. Fam. Nat. ~~l.c.~~ 1, 75.
Loo Choo In shady woods.

Angelica Japonica (vide Jap. coll.).
Katonasima: in fruit.

This is pretty clearly the same as the plant from Cape Soya; and the character of the species was ~~formed~~ drawn from both. The mericarps are 3 lines long and 2 lines wide, retuse at both ends; the rather corky wings pretty as broad as the body of the fruit; the dorsal ribs thickish and very obtuse; a vitta in each interval and four on the ~~com~~ ~~inner~~ ventral face: these belong to the adherent pericarp.

Torilis Japonica DC. Prodr. 4, 219; Hook. & Arn. Bot. Beechey, 189; Sieb. & Zucc. l.c.
Loo Choo In shady woods. Tukunosima,

Torilis scabra, DC. l.c.
Agenhu I. A common weed. Loo Choo abun

Hant. Oso on Tukunosima.

(?) This may be only a variety of the preceding but it has the leaves more finely dissected. The whole plant too is generally smaller; the umbel has 2-5 rays; the involucre is mostly wanting; the fruit is 2-3 times as long as that of B. Japonica.

Cymopterus? littoralis, Gray in Bot. Stevens. Rep. R. R. Surv. ined. var. glaber. vel spec. valde aff. Loo-choo Islands, in the sands of the sea-shore.

Except that it is glabrous, or rather glabrate, and the wings of the fruit are thicker and ~~scarce~~ scarcely undulate, these specimens accord with those of a remarkable low plant gathered by Dr. J. G. Cooper on the sands of the sea shore in Washington Territory, N. W. America.

Araliaceæ.

Hedera Helix, Linn.; DC. Prodr. 4. 261; Sieb. & Zuc. l.c. 1. 94.

Kakea Island. Climbing on the trunks of trees — apparently indigenous. Flowers greenish; petals purple externally.

Paratropia 101
Kakeah I.

Helwingia ruscifolia, Willd.; Sieb. & Zucc. Fl. Jap. 1. p. 164, t. 86. Ousima; in fruit.

Cornaceae.

Aucuba Japonica, Thunb. Fl. Jap. p. 64, t. 12; Sieb. & Zucc. Fl. Jap. Fam. Nat. 1. 86; DC. Prodr. 4, 274.

Tukunosima. Shaded mountain sides, a slender sparingly branched bush.

Loranthaceæ.

Viscum articulatum, Burm. var. moniliforme, Blume, Bijdr. Fl. Ned. Ind. 667; DC. Prod. 4, 284; Wight, Ic. 1018.

Oosima. Bonin Island.

Loranthus (Buds only) No 260

Oosima Parasitic on oaks in large bunches

Caprifoliaceae.

Sambucus adnata, Wall.; DC. Prodr. 4, 322.

(Bonin Islands and Loo Choo, Suffruticose, 3–5 feet high sparingly branched. Flowers white, berries red.

Viburnum odoratissimum, Ker; Hook. & Arn. Bot. Beechey, 190; DC. Prodr. 4, 326. V. sinense Colla, Hl. et Ic. Rar. Stirp. Asph. 2, p. 330, t. 16.

Woods near Shui, Loo Choo. A large branching bush 6–10 feet high—berries red.

Viburnum plicatum, Thunb.; DC. Prodr. 4, 329; Sieb. & Zucc. Fl. Jap. 1, 81, t. 37; Gray in Perry's Jap. Exp. 2, 313.

Cleopatra I. J. Small

Viburnum photiniaefolium sp. n

107. Vi[illegible]. [illegible] & [illegible],

Fruticosum foliis ovalibus acuminatis basi subcuneatis sinuato-dentatis subtus nervis ~~transv~~ transversis venulosis glabris. Ramulis, foliis [illegible] junioribus, ~~tomen~~ ~~too~~ pedunculis pedicellisque tomentosis. Floribus albis. baccis rubris

Loo Choo. Oosima.

Rubiaceæ. By A. Gray.

Galium trachyspermum, Gray in Perry, Jap. Exped. 3. p. 313, & infra supra p. . G. rotundum, Thunb.; Hook. & Arn. Bot. Beech. p. 265. Loo Choo Islands, Ousima, and Katonasima.

Small and broad-leaved forms, (sometimes much branched, and) with very copious and small flowers.

Galium Aparine, Linn.; var. Vaillantii, Koch. Loo Choo Islands: common in fields.

Serissa foetida, Comm.; DC. Prodr. 4. p. 575. Loo Choo Islands; on mountains and shaded banks.

Damnacanthus Indicus, Gaertn. & var. major. (D. major, Sieb. & Zucc. l.c. Ousima. The var. major, Katonasima.

The D. major is not to be distinguished by any stable or sufficient characters.

Morinda umbellata, Linn.; DC. Prodr. 4. p. 449. Bonin Islands; on the summit of hills. Ousima a; climbing over bushes.

A weak, spreading or climbing ~~bush~~ shrub, 2 to 4 feet high. Fruit bright red. Flowers not seen.

Psychotria serpens. Linn. Mant. p. 204; Benth. ~~in~~ Kew. Jour. Bot. 4. p. 198. Ousima a and Bonin Islands; in fruit.

"Climbing over bushes and trees, Berries white." — The plant from Bonin is of a remarkably robust variety; the leaves from 2½ to even 3½ inches in length.

Psychotria elliptica, Ker. Bot. Reg. t. 607; Benth. l.c. P. Reevesii, Wall. in Roxb. Fl. Ind. 2. p. 164; DC. Prodr. 4. p. 579. Grumilea Reevesii, Hook. & Arn. Bot. Beech. p. 193 & 265. P. Manillensis, Bartl. in DC. l.c. p. 522. Ousima and ~~Ous~~ Loo Choo Islands; in thickets.

"A shrub or small tree, from 6 to 15 feet in height, sparingly branched.

Psychotria homalosperma (sp. nov.): arborescens, glaberrima; stipulis brevibus latis (basi excepta) caducis; foliis obovatis seu obovato-oblongis breviter acuminatis basi in petiolum longiusculum angustatis opacis; pedunculo terminali ~~vel~~ nunc sublaterali ancipiti foliis dimidio brevioribus; cyma laxiflora; floribus fructibusque pro genere maximis, alaribus sessilibus; calycis limbo brevi fere integerrimo; corolla hypocraterimorpha, tubo lobis ter longiore intus nudo; pyrenis 2 cartilagineis latissime ovatis valde complanatis dorso ad medium et margines tenuiter cristato-costatis; semine plano ~~disci~~ lamelliformi. — Bonin Islands; in shady woods.

"A branching shrub, 10 to 18 feet high, or a small tree. Flowers white." Leaves much resembling those of P. elliptica, often smaller and more obovate. Cyme ~~brachi~~ open, on a

flat or two-edged peduncle of about 2 inches in length; the divisions articulated, also ancipital; pedicels (lateral) 3 or 4 lines long. Limb of the calyx shorter than the ovary. Tube of the corolla 9 lines long; the lobes narrowly oblong, thick, valvate in æstivation, glabrous. Anthers linear bluntly ~~apical~~ tipped by ~~an~~ extension of the connective. Ovule solitary and erect from the base of each cell. Drupe with a ~~very~~ thin pulp, flat, broadly ovate and half an inch long in the dried specimens; the thin pyrena marked with a slight and thin ridge on the back and a similar one close to each margin, otherwise even, ~~Seed~~ as is the remarkably thin seed. Funiculus membraniform broadly cuneate. — This must be a Psychotria, of Bentham's section Notopleura; the fruit is most like that of P. (Piptilema) platycocca, Gray, in Proceed. Amer. Acad. 4 p. 46.

Pædiria fœtida, Linn.; Thunb. Fl. Jap. p. 107. Loo Choo Islands.

Mephitidia Wallichii, Wight & Arn. Fl. Penins. Ind. Or. p. 390. Lasianthus Wallichii, Wight in Calc. Jour. Nat. Hist. 6. p. 503. Oosima; on shaded hill-sides.

"A small, sparingly branched shrub: berries light blue." The same as Drs. Hooker and Thomsons plant, from Khasia. With it, and perhaps only a ~~form~~ variety or state of the species is a specimen with the leaves almost sessile, and unequal at the base, rounded on one side and oblique on the other; the same

Mephitidia acuminata, Wight. l.c. sub Lasiantho? With the foregoing. "Flowers white, berries blue."

"Berries red." Leaves varying from lanceolate-oblong to oval-obovate. Drupe 3 to 4 lines long, with a strongly grooved and ridged putamen. Albumen sometimes decidedly, sometimes scarcely at all ruminated.

Stylocoryne racemosa, Cav. Ic. 4. p. 45. t. 368; ~~Hook.~~ DC. Prodr. 4. p. 377; Hook. & Arn. Bot. Beech. p. 264. ~~in~~ ~~Miquel.~~ Loo Choo Islands; in shady woods; in flower and fruit.

"Flowers white, scentless." Accords with the figure given by Cavanilles; but the limb of the calyx is not persistent on the fruit; ~~in this or other species, as stated in the generic~~ ~~[illegible]~~ ~~character~~; Corolla slightly hairy in the throat, Anthers long-linear. Ovules about 6 in each cell. Berry when full grown of the size of the largest pea, 3-4-seeded. Seeds and embryo as in the genus. Perhaps this

(and the cymes are terminal, becoming lateral by innovation, rather than axillary.

is distinct from the Manilla plant
on which Cavanilles established ~~the~~
species and genus, since that is
said to have ~~a polyspermous berry,~~
~~and in Gaertner's figure, taken~~
ten: or twelve seeds in each cell,
by Gaertner, whose materials, derived
from Herb. Jussieu, probably are
quite authentic for Cavanilles'
plant.

Stylocoryne? subsessilis (sp. nov.); fruticosa; foliis brevissime petiolatis e basi rotundata ovato-oblongis acuminatis subcoriaceis supra glaberrimis subtus cum ramulis junioribus striguloso-pubescentibus; cyma terminali sessili densa; baccis globosis 1-6-spermis. — Bonin Islands; on hills.

Shrub 3 to 5 feet high, sparingly branched; the branches soon glabrate. Stipules triangular-lanceolate, acuminate, deciduous. Leaves 4 to 6 inches long, on petioles of not more than 3 lines in length, or the upper ones nearly sessile by a rounded or retuse base, varying from oblong to oval-ovate, the whole lower surface minutely pubescent ~~beneath~~ with short and rather rigid appressed hairs. Cyme sessile, trichotomous; the primary divisions from half an inch to an inch long; the secondary ones still shorter, in fruit forming a dense depressed cluster, ~~which is invol~~ of one or two inches in diameter, which is often involucrate by the two uppermost pairs of ample leaves. Pedicels glabrous or nearly so. Berry globular, as large as a pea, naked at the summit, commonly ripening 3 or 4 rather large seeds. — Although the flowers are unknown, I presume this is a Stylocoryne. Possibly it may be the doubtful S. Webera which Hooker and Arnott received from Bonin. [From a view of the specimen of Hooker and Arnott's Haramea (Tetramerium) — in Bot. Beech. p. 295, it is pretty clear that, although smoother, it is the same as the present plant.]

Randia? canthioides, Champion; Benth. in Kew Jour. Bot. 4. p. 194. Ousima; on shady hills.

In fruit only: the pedicels 6 to 8 lines long. Seeds like those of Stylocoryne, not immersed in pulp. Embryo two-thirds the length of the firm albumen, straight: radicle very slender: cotyledons small, ovate.

Mussænda glabra, Linn. ex Hook. & Arn. Bot. Beech. p. 264. Ousima; on shady hills.

A slender, branching shrub. Very incomplete specimens, in fruit only.

Gardenia florida, Linn.
Loo-choo, Katonkasima. G.; in flower and fruit.

Oldenlandia paniculata, Linn.; var. parvifolia; foliis spathulato-~~obl~~ oblongis obtusis carnosis; pedunculis paucifloris nunc elongatis (1-2-pollicaribus) nunc folia haud superantibus. Hedyotis biflora, var.? parvifolia, Hook. & Arn. Bot. Beech. p. 264. Loo-Choo: pendulous from crevices of perpendicular rocks overhanging the sea.

Although the variation in the length of the peduncle is striking, this is clearly of the same species as the plant gathered of the island of Kiusiu, Japan, which may confidently be regarded as O. crassifolia, Benth., and a maritime form of O. paniculata. It is not O. biflora; the stems are suffruticulose. Except that the leaves are very obtuse instead of "acuminate" (DC) I should take the plant to be Chamisso's Gerontogea racemosa, from Radack, Is. Indeed it accords ~~pretty n~~ very nearly with maritime specimens from the South Sea Island, collected by Mr. Milne.

Hedyotis leptopetala (sp. nov.); suffruticosa, glaberrima; caule quadrimarginato; stipulis brevibus nudis; foliis ovato- seu oblongo-lanceolatis subacuminatis mucronato-acutis basi sæpius acutis brevissime petiolatis chartaceis subtus fere aveniis; cyma terminali composita densiflora; calyce cyathiformi truncato ~~4-denticulato pedicello brevi~~ brevissime 4-dentato pedicello 2-3-plo ~~multo~~ breviori ~~ibus~~; Corollæ 4-partitæ nudæ tubo globoso, segmentis longe linearibus; filamentis styloque gracillimis glabris; capsula ovoidea apice libera primum loculicida demum septicida dicocca. — Hedyotis multiflora? Hook. & Arn. Bot. Beech. p. 264, non Cav. — Bonin Islands; in ravines.

In foliage, ~~and~~ inflorescence, &c. this ~~spe~~ ~~striking~~ remarkable species much resembles H. scandens, Roxb.; and it must be very nearly allied to H. cordata, Zucc. also from the Bonin-

Islands. The latter, however, is described as having broadly ovate leaves sessile by a cordate base, ovate calyx-teeth, and the corolla bearded in the throat. Our plant ~~P~~ grows in large bunches, 3 to 5 feet high, with a suffruticose base. Leaves 2 to 3½ inches long, less acuminate than those of H. scandens, only the uppermost obtuse or roundish at the base; petiole one or two lines in length. Stipules like those of H. scandens, but less truncate, or the smaller ones triangulate, not at all setose. Pedicels 2 or 3 lines long. Calyx very short. Corolla pink or purplish, half an inch long; the tube exactly globose or a little depressed, the ~~long~~ limb linear-clavate in the bud, the long and narrow linear lobes widely spreading in anthesis, glabrous; no beard or ~~hairiness~~ pubescence within. Filaments and style as long as the lobes of the corolla. Anthers oblong-linear. Stigma emarginate. Ovary glabrous at the summit. Capsule 2½ lines long, coriaceous, short-ovate, obtuse, one-third free, early loculicidal at the top, but only tardily septicidal. Placentæ many-seeded.*

Loganiaceæ.

Buddleia curviflora, Hook. & Arn. Bot. Beech. p. 267? Island of Kakeah, north of Loo Choo Islands.

Imperfect specimens, with ripe fruit only, ~~and~~ hardly determinable.

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* I have to add that this is manifestly Leptopetalum Mexicanum, Hook. & Arn. Bot. Beech. p. 295. t. 61, and that this is another of those Bonin or Loo Choo plants which, by some unfortunate accident, were mistaken for Mexican. ~~Fortunately~~

Compositæ. By A. Gray.

Vernonia cinerea, Less.; DC. Prodr. 5. p. 24; Hook. & Arn. Bot. Beech. p. 265. Loo Choo Islands.

Adenostemma latifolium, Don, Fl. Nep. p. 181; DC. Prodr. 5. p. 112. A. parviflorum, Blume (sub Lavenia); DC. l.c. Loo Choo Islands: in shady thickets.

"Flowers white." Achenia glandular, scarcely papillose.

Eupatorium Finlaysonianum, Wall.; DC. Prodr. 5. p. 179? E. album, Thunb. Fl. Jap. p. 308, ex char.; Kaempf. Ic. ed Banks. t. 26; Loo Choo Islands, on hills. Flowers white.

Eupatorium Reevesii, Wall. Cat.; DC. l. c.; Benth. in Kew Jour. Bot. 4. p. 233; Hook. & Arn. Bot. Beech. p. 265; E. chinense, Thunb. Fl. Jap. p. 308, ex char., non Linn. — Loo Choo Islands, and Agincourt.

Some specimens are recorded as having red or pink, others purple, others very light purple, others white flowers: they are probably flesh color.

Calimeris ciliata (sp. nov.): subpedalis; caulibus ramisve adscendentibus foliosis fere glabris mono-oligocephalis; foliis radicalibus oblongo-spathulatis obtusis crenato-serratis, caulinis oblanceolatis linearibusque basi angustata sessilibus, integerrimis, omnibus hispido-ciliatis, paginis glabris; involucri squamis biseriatis laxis herbaceis lineari-attenuatis cuspidatis ~~vel acu~~ hispido-ciliatis; pappo ~~ferrugine~~ rufo rigido achenio hirsuto subdimidio breviore, radio conformi sed parciore. — Oosima, one of the islands intermediate between the proper Loo Choo islands and Japan, J. Small.

Except in the smoothness and in the want of a corniform pappus to the ray-flowers this plant is nearly related to Heteropappus hispidus, Less., of ~~Jap~~ the southern part of Japan. But it is a true Calimeris. There are numerous stems from a thick perennial root, 6 to 12 inches high, usually ascending rather than erect. Leaves all conspicuously and for the most part thickly ciliate with hispid hairs, which are ~~not~~ little rigid, as they are much attenuated from a thickish base: radical ones 2 or 2½ inches long, including the tapering base or margined petiole, 6 to 8 lines wide, somewhat 3-nerved at the base; the cauline ~~2 to~~ gradually reduced to oblanceolate and linear, and to an inch in length, one-nerved, probably a little fleshy; those of the flowering branches or summit half an inch long and passing into the scales of the involucre, which are not at all scarious-margined, and fully equal the disk. Rays 20 or 30; ligules linear, light blue or purple, or sometimes white; disk yellow. Achenia 2 lines long, flat, margined. Pappus of copious, pretty rigid and scabrous, nearly equal, rusty-reddish bristles, all ~~somewhat~~ slightly connected in a ring at the very base, ~~in an indurated ring~~ persistent.

Asteromaea Indica, Blume, Bijdr. p. 901; DC. Prodr. 5. p. 302. Aster Indicus, Linn.? Thunb. Fl. Jap. p. 316. Loo Choo Islands; common.

Solidago Virgaurea, Linn.; Thunb. Fl. Jap. p. 317; Var. leiocarpa, (Vide Hongkong & Japan collections) Ousima, ~~Katon~~ Katonasima, and the proper Loo Choo Island; upon open hillsides.

Dichrocephala latifolia, DC. Prodr. 5. p. 372; Hook. & Arn. Bot. Beech. p. 265. Katonasima, along rivulets.

Conyza Japonica, Less.; DC. Prodr. 5. p. 382. Ousima and Katonasima, on mountains and hillsides.

Blumea

Eclipta prostrata, Linn. Mant. p. 286; Thunb. Fl. Jap. p. 321. Kikai-sima, Loo Choo Islands.

Siegesbeckia orientalis, Linn.; Thunb. Fl. Jap. p. 321.

Wedelia calendulacea, Less.; DC. Prodr. 5. p. 539

Wollastonia scabriuscula, DC. in Ann. Mus. Par. & Prodr. 5. p. 457; Benth. l. c. Loo Choo Islands; on open rocky hills and in valleys "climbing over trees."

Bidens Chinensis, Willd.; Steetz in Bot. Voy. Herald, p. 390. B. pilosa, Thunb.? Ousima.

Bidens pilosa, Linn.; DC. Prodr. 5. p. 597. Loo Choo; in shady woods.

Pyrethrum Sinense, Sabine; DC. l. c. 6. p. 62. Ousima, and the proper Loo Choo Islands; the latter very canescent forms.

(Chrysanthemum coronarium, Linn.; Thunb. Fl. Jap. p. 320. Loo Choo Islands.

Artemisia vulgaris, Linn.; Thunb. Fl. Jap. p. 310. Loo Choo Islands; on open, rocky hills.

Artemisia campestris, Linn.; Ledeb. Fl. Ross. 2. p. 564? Sand banks and on rocks, along the seashore; Loo Choo Islands.

Tanacetum Chinense. Artemisia Chinensis, Linn. Spec. ed. 1. p. 849, excl. syn. Gmel. Absinthium maritimum Sinarum lavandulaefolio, Pluk. Amalth. t. 153. f. 5. ~~Artemisia Lavandulaefolia, DC. Prodr. 6. p. 110~~ Ethulia tomentosa, Linn. Mant. p. 110. South Point, Loo Choo Islands; in crevices of rocks.

I have the same species from Mr. Hance (the specimens ~~and~~ said to be cultivated at Amoy), under the name of Artemisia Chinensis, Linn. Doubtless it is the Linnaean plant, and that figured by Plukenet; but not the A. lavandulaefolia of DeCandolle, which is more particularly described by

Steud. I should confidently take it for Crossostephium artemisioides, Less., except that the scales of the involucre are broadly oval and very obtuse, and the female flowers, although rather numerous, ~~occupy only one a~~ are all in one series, in the margin, and their corollas are by no means filiform. The plant from Canton may belong here, however it be with that of Manilla. Our plant is a low shrub, from one to three feet in height, with leaves which may remind one of Pemphis, only whiter, longer and linear-spatulate; they are all very obtuse and entire. Receptacle strongly convex. Corolla of the female flowers of the same length as the hermaphrodite ones, ~~short~~ and little ~~scarcely~~ less in diameter, oblong-linear, ob-compressed, rather strongly 4-toothed. Achenia turbinate, glabrous, a little glandular, somewhat 5-ribbed, the broad summit crowned with a conspicuous pappus of numerous rather firm paleae (in length equalling the breadth of the achenium) united at their base into a shallow cup. ~~The plant s~~ Appendage of the anthers ovate and very obtuse. — The plant surely belongs to Tanacetum.

Gnaphalium multiceps. Wall. Cat.; DC. Prodr. 6. p. 222. G. confusum. DC. l. c.; Gray, in Perry. Jap. Exped. 2. p. 314. Katonasima and Amakirrima, Loo Choo Islands; in vallies and in cultivated soil.

Both with simple and slender and with multiple stems; the same as the plant from Hongkong, and not different from Indian specimens. The same also as the plant of which imperfect specimens were gathered in Japan by Dr. ~~Morrow~~ Morrow, and doubtless G. arenarium. Thunb. The leaves are more or less decurrent.

Gnaphalium involucratum. Forst. Prodr. p. 55; DC. l. c. p. 235; Hook. f. Fl. N. Zeal. 1. p. 139. & Fl. Tasm. 1. p. 217. G. Japonicum, Thunb. Fl. Jap. p. 311. ex char. Katonasima, on cultivated hills.

"Capitula dull purplish". Without much doubt this is Thunberg's G. Japonicum, and it is certainly ~~G. invol~~ not distinct" from G. involucratum of New Zealand and Australia; — a rather slender form,

(well-developed
and with the) stems considerably naked above, but the capituli form glomerule of heads, well involucrate. G. collinum, Labill. is hardly distinct enough.

Emilia sonchifolia, DC. Prodr. 6. p. 302. Loo Choo Islands.

Gynura bicolor, DC. l. c. p. 299. Cacalia bicolor, Roxb.; Salisb. Parad. Lond. t. 25; Ker. Bot. Reg. t. 110. Vallies, in the Amakirrima group, Loo Choo Islands.

"A widely spreading plant, with orange-colored flowers. Some of the leaves are tinged with purple underneath; others, not at all so. Appendages of the style slender, hispid.

Ligularia Kaempferi, Sieb. & Zucc. Fl. Jap. 1. p. ~~[illegible]~~ 77. t. 35. Tussilago Japonica, Thunb. Senecio Kaempferi, DC. Prodr. 6. p. 363. Loo Choo Islands; common on hillsides.

Aplotaxis multicaulis, DC. Prodr. 6, p. 540, & in *Deless. Ic. Sel. 4, t. 68*? Gray in *Perry, Jap. Exped. 2, p. 314*. Katonasima and Ousima, northern Loochoo Island.

Plant from one to three feet in height, from an annual root; stem simple or much branched, striate-ribbed. Leaves lyrately pinnatifid or pinnately parted, or some of them entire; the lobes often obtuse, the larger ones more or less toothed, oblong with a narrowed base. Heads of the size of those of Cirsium arvense. Scales of the involucre ~~not~~ at all pungent; the outermost very short, ovate; the succeeding successively longer, ~~tipped with a short~~ somewhat appendiculate; the inner linear, ~~with~~ acutish. Receptacle conical, densely setose. Achenia short-oblong, striate-ribbed, the more or less oblique ~~so~~ summit crowned with a somewhat irregular cupulate border, within which on one side ~~on the cavity is~~ are the vestiges of a persistent exterior pappus, in the form of 6 or 8 very short and crowded paleæ or squamellæ, which slightly project. Inner pappus that of Aplotaxis. The latter genus, as defined, has no sufficient characters.

Cirsium brevicaule (sp. nov.): foliis profunde pinnatifidis dentatis spinosis, et spinuloso-ciliatis utrinque glabris (costa subtus primum arachnoidea), radicalibus caule arachnoideo plerumque longioribus, caulinis semiamplexicaulibus haud decurrentibus oblongis; capitulis 2–5 ~~subglomeratis~~ subcorymbosis breve pedunculatis; involucro pl. m. folioso-bracteato hemisphaerico glabro, squamis lanceolatis acuminatis erectis, exterioribus ovato-lanceolatis spinula terminatis. — Carduus acaulis, Thunb. Fl. Jap. p. 306? Cirsium Japonicum, Hook. & Arn. Bot. Beech. Voy. p. 266. Kikaisima, Amakirrima, and proper Loo Choo Islands.

The stem in most specimens is only a span high, and bearing from three to several heads, while the radical leaves are from 6 to 15 inches in length. These resemble those of C. acaule, except in their greater size. The heads are rather larger than in that species, and are hemispherical, the outer scales of the involucre larger in proportion: the leafy bracts ~~about the~~ more or less

involucrate, about the length of the involucre. Flowers white, turning purplish, or purple. The largest specimens are said to be three feet high; the stems ~~than~~ considerably branching.

Lappa major, Gaertn.; DC., Prodr. 6, p. 661. Loo Choo Island; in cultivated soil.

Ixeris debilis, Gray; vide Jap. Coll. p. ; Prenanthes debilis & P. humilis?, Thunb. Amakirrima and proper Loo Choo Island; in sand along the shore. (Bearing more numerous heads, in most cases, than the Japanese specimens.)

Ixeris (Chorisis) repens, Gray; vide Jap. Coll. l.c. On the sandy shore. Flowers yellow.

Ixeris? (Ixeridium?) linguaefolia (sp. nov.); caule folioso ~~basi crasso~~ suffruticoso superne paniculato; foliis subglaucis crassiusculis (integerrimis obtusissimis, sessilibus) in caudice crasso lingulatis basi angustatis, in caulibus ramisve ~~floridis~~ herbaceis, floridis oblongis mucronatis basi cordata amplexicaulibus; capitulis ~~parvis~~ numerosissimis parvis confertissime corymbosis; involucro cylindrico 4–5-phyllo vix calyculato 5-floro; "floribus albidis vel flavidis"; acheniis valde immaturis oblongis 10-striatis apice infra discum ~~dilatat~~ planum in collum constrictis; pappo sordescente uniseriali. — Bonin Islands; on hill-sides.

A peculiar plant, of doubtful genus, wholly glabrous, glaucescent; stems about 2 feet high: the thick and lignescent, ~~apparently fleshy~~ base or caudex apparently fleshy, thickly beset with spatulate-oblong or lingulate leaves, 6 or 8 inches in length, and ~~from one to [illegible]~~ between one and two inches in breadth, very obtuse or retuse, thickish, persistent or at length marcescent, the midrib strong, the veins inconspicuous. Leaves on the annual flowering stems 5 to 8, mostly only one or two inches long, and cordate-clasping; those of the branches ~~great reduced~~ gradually reduced to roundish bracts. Heads much crowded, short-pedicelled. Involucre 2½ lines long, narrowing. Corolla glabrous. Receptacle naked. Mature fruit unknown. From the abrupt contraction ~~beneath the~~ into a neck beneath an epigynous expanded disk in these not full grown, I suppose there will be a beak, like that of Ixeris repens; And as the corolla is wholly glabrous, I therefore associate the plant with the few-flowered species of ~~with sordid pappus which (~~ in the Japan collection, with sordid pappus, upon which I have founded a section of Ixeris. But in habit it much more resembles the following.

(Youngia integra, Gray; vide Jap. Coll. p. , Prenanthes integra, Thunb. Fl. Jap. p. 300; Hook. & Arn. Bot. Beech. Voy. p. 266. Ousima and Loo Choo Islands.

Ascending stems from a span to 2 feet in height. Lower leaves occasionally sinuate-toothed.

Youngia Japonica, DC. l.c.; vide Coll. Jap. p. ; Loo Choo Islands; common.

Slender forms of the species, with open inflorescence.

Lactuca brevirostris, Champion; Benth. in Kew. Jour. Bot. 4 p. 237; Open hillsides; Loo Choo Islands.

Sonchus oleraceus, Linn.; Fl. Dan. t. 682. Agenhu, G. Loo Choo Islands.

Sonchus asper, Vill.; Fl. Dan. t. 893. Kakaisima, Loo Choo Islands.

Goodeniaceæ.

Scaevola Lobelia, Linn. var. sericea, Supra
Bonin I. Suffruticose 2–5 feet high
Berries pure white.

Lobeliaceae

[illegible]
Boivin S.

Campanulaceae.

Adenophora verticillata, Fisch.; A.DC Prodr. 7, 492.; Sieb. & Zucc. Fl. Jap. Fam. Nat. 2, 56.

Amakerima 2. J. Small. Takunosima, Agenhu, Oosima. Hillside, Flowers purple.

Wahlenbergia marginata, A. DC. Camp. 143; & Prodr. 7, 433; Sieb. & Zucc. l.c.

Amakerima 2. J. Small. Agenhu.

Ericaceæ

“Vaccinium (Batodendron) Wrightii (sp. nov.): glaberrimum, 2–5-pedale; foliis coriaceis perennantibus ~~palli~~ opacis ovatis oblongisve utrinque acutis vel subacuminatis subserratis; racemis brevibus laxifloris; pedicellis secundis nutantibus bracteam scariosam deciduam ter superantibus; calycis lobis acutissimis; corolla (rubella glabra) obovato-urceolata ~~5-dent~~ 5-carinulata, ore 5-dentato; filamentis villosis; antherarum aristis arrectis tubulis gracilibus brevioribus; ovario sub-10-loculari. — Ousima north of the Loo Choo Islands, on hill tops.

“Leaves an inch or rarely 2 inches long, much like those of V. Chinense. Racemes terminal and from the upper axils, leafless, one or two inches long. Bracts ovate-lanceolate; bractlets minute. Pedicels half an inch in length, articulated with the pedicel, as in V. bracteatum and in various

Indian species. Lobes of the glabrous calyx shorter than the ovary. Corolla 3 lines in length. Berries black and shining. — Our North American V. arboreum also has the pedicel articulated with the flower, which V. stamineum (Picrococcus, Nutt.) has not. The latter should be excluded from the section Batodendron, which (neglecting the particular shape of the corolla) will include the present and ~~som~~ some Indian species." A. Gray.

Ericacea.

Vaccinium ~~[illegible] ... Tsuka Province ... Blackar ... [illegible]~~

Azalea Indica, Linn. Supra
Amakusima I. J. Small. Loo Choo in gardens. Tokunosima I.

Rhododendron. 171

Rhododendron linglorum sp. n. Fruticosum ramorum ramulis adpresse pilosis. foliis ellipticis breviter acuminatis glabris petiolatis pilosis, subvillosis bracteis ferrugineo-pillosis apiculatis floribus 3-4 nis foliis brevioribus, ovariis villosis.

Shaded hillsides Ousima Fl. white - lower ~~r~~ lobe, marked with red lines on the inside - a few similar ones on the two adjoining segments. The nerves ~~of~~ at the base also red. A strongly branched bush.

Androsace patens C. Wright in Gray Mem.
Fl. Japan p. 401

Stimpsonia chamaedryoides C. Wright l.c.

Primulaceae.

Anagallis arvensis, Linn.; Duby in DC. Prodr. 8, 69; Sieb. & Zucc. Fl. Jap. Fam. Nat. 2, 17; A. caerulea Hook. & Arn. Bot. Beechey l.c.
Loo-Choo. In fields by the seaside. Fl. violet.

Lysimachia lineariloba, Hook. & Arn. l.c.; Sieb. & Zucc. l.c.; Duby in DC. Prodr. 8, 61.

Loo Choo. Along the seashore—succulent. Flowers white. Hooker's ~~Hoon~~ character represents the leaves as "impunctate". Siebold & Zuccarini describe them as very closely punctate. In our specimens they are pretty closely dotted especially towards the margin along which they are more numerous than on other parts. The dots are dark brown or ferruginous or on the calyx much lighter. The capsule is very conspicuously apiculate at the base of the persistent style. Pedicels elongated (½ inch or more) in fruit.

Lysimachia japonica, Thunb. Fl. Jap. 83; Sieb. & Z. l.c.; Duby in DC. Prodr. 8, 76.
Amakirima Is. J. Small. Loo Choo in woods. Tukunosima on mountain tops. Flowers yellow.

Primulaceae 231
Primulaceae 232

Myrsinaceae.

Maesa montana, DC. Supra,
Oosima, L. Small. Loo Choo, in woods at Shudi. A sparingly branched bush. Fruit very light reddish.

Myrsine neriifolia, Sieb & Zucc. Fl. Jap. Fam. Nat. 2. 13.
Oosima. Shaded hillsides. A slender erect bush. 6-12 feet high. Bonin Is. in fruit.

Ardisia pauciflora, Heyne. Supra.
Loo Choo Woods near Shudi. A slender bush 4-7 feet high. Flowers light pink. Also Oosima.

Ardisia pedunculosa Wall. fide DC. Prodr. 8. 128.
Bonin Islands. A large spreading bush.

Ardisia crispa, A. DC. Supra.
Oosima. A sparingly branched bush 3 feet high. Berries light red & shining

Sapotaceae.

Sideroxylon ferrugineum, Hook. & Arn. Bot. Beechey, 266, t. 55; A. DC. Prodr. 8, 178

Bonin I., A bush. 5-12 feet high

Sapota costata?

Ebenaceae
~~Sapotaceae.~~

Diospyros Japonica. Sieb. & Zuc. Fl. Jap. Fam. Nat. 2, 12.

Komisang Island. J. Small. A small tree 20 feet high. Flowers (bud) reddish yellow. Whole plant quite smooth except the calyx & the connective of the anthers.

Styraceae.

Symplocos leptostachys, Sieb. & Zucc. Fl. Jap. Fam. Nat. 2, 10; Walp. Ann. 1, 449.
Ousima. Shaded mountain side. Flowers white. A slender bush 8-15 feet high.

Symplocos Japonica, A. DC. Prodr. 8, 255; Sieb. & Zucc. l.c. S. lucida Sieb. & Zucc. Fl. Jap. 1, 56, t. 24.
Amakerima I. A bush 10 feet high.
J. Small.

Symplocos neriifolia, Sieb. & Zucc. Fl. Jap. Fam. Nat. 2, 10; Walp. l.c.
Ousima. Shaded hills. A bush 8-12 feet high.

Styrax Japonicum, Sieb. & Zucc. Fl. Jap. 1, 53, t. 23; A. DC. Prodr. 8, 266.
Oosima. A tall bush 6-12 feet high.

Oleaceae.

Ligustrum japonicum, Thunb. Fl. Jap. 17, t. 1; Sieb. & Zucc. Fl. Jap. Fam. Nat. 2, 44; DC. Prodr. 8, 243.

Unakerima & Komisang. J. Small. Loo Choo, Agenkum & Bonin I. Bush 4-5 feet high. Flowers white or very light pink. Only 4 pink.

~~Ligustrum Ibota, Sieb.; Sieb. & Zucc. l.c.; Walpers Ann. 5, 18.~~

Fraxinus longicuspis, Sieb. & Zucc. l.c.; Walp. l.c.

~~Hak~~ Tukumorima. A large spreading bush.

Ligustrum ~~macranthum~~ japonicum, Zucc.; Sieb. & Zucc. l.c.; Walpers Ann. l.c.

Bonin. J. Small. A bush 6 feet high. The few specimens in fruit.

Aquifoliaceae.

Ilex integra, Thunb. Fl. Jap. 77; Sieb. & Zucc. Fl. Jap. Fam. Nat. 2, 40;) Prinos integra (DC. Prodr. 2, 16;) (Hook. & Arn. Bot. Beechey, 261

Ousima on the mountains. A bush 4-8 feet high

Ilex rotunda, Thunb. Fl. Jap. 77; Sieb. & Zucc. l.c.; DC. Prodr. 2, 16.

Bonnisang Island, J. Small

Apocynaceae.

Vinca ~~minor~~ rosea, Linn. Japan
Loo Choo, in cemeteries

Ochrosia Borbonica, Gmel.; A. DC. Prodr. 8, 356.

Bonin Islands. A large branching shrub mature fruit yellow, 2-celled, 2 broad flat seeds in each cell.

Parechites Thunbergii, Gray; vide Jap. Coll. p. . Malouetia Asiatica, Sieb. & Zucc. Fam. Nat. Fl. Jap. 2. p. 39. Ousima, and Bonin Islands.

In fruit only; but pretty plainly the same as the Japanese plant. According to Zuccarini, it was gathered by Mertens in the Bonin Islands.

Asclepiadaceae.

Vincetoxicum japonicum, Morr. & Dcne.; Dcne in DC. Prodr. 8, 524; Gray in Perry's Jap. Expl. 2, 317/ Oosima Flowers light yellow.

~~Heligme [illegible]~~ [illegible] 195—
Heligme javanicum Blume Bijdr. p. 1043?

Borraginaceæ.

Cordia thyrsiflora, Sieb. & Zucc. Fl. Jap. Fam. Nat. 2, 26; Walp. Ann. 1, 523.
Loo Choo. A large bush 10-12 feet high by roadside, near Shudi. Specimen in fruit.

Ehretia heterophylla, Spreng.; DC. Prodr. 9, 507. Carmona heterophylla, Hook. & Arn. Bot. Beechey 267.
Loo Choo. A large branching bush in thickets. Specimens in fruit.

Ehretia, E. macrophylla, aff.
Cosima. Lieut. McCullom. A single specimen in fruit

Bothriospermum tenellum F. & Meyer asperugoides, Sieb. & Zucc. l.c.; Walp. Ann. 1, 526.
Loo Choo in fields. Agenhu Island in fields, Harbor 2.

Eritrichium pedunculare, DC. Prodr. 10, 128; Gray, l.c.
Amakirima Island, J. Small. Loo Choo. Flowers white! In DC. they are said to be blue.

after Ehretia

Tournefortia argentea, Linn.; DC. Prodr. 9, 514.

Bonin Island Suffruticose 6 8 feet high widely branched.

Convolvulaceae.

Pharbitis insularis, Chois. in DC. Prodr. 9, 341.
Loo Choo, Oosima, Ugenhu.

Ipomaea reptans, Poir.; Chois. ~~in DC.~~ l.c. 349; Hook. & Arn. Bot. Beechey, 267.
Loo Choo.

Ipomaea tuberculata R. & Sch.; Chois. l.c. 386.
Streets of Napa, Loo Choo.

Calystegia Soldanella, R. Br. Prodr. 483; Chois. ~~in DC. Prodr.~~ 433; Sieb. & Zucc. Fl. Jap. Fam. Nat. 2, 23; Gray in Perry's Jap. Exp. l.c.
Loo Choo. Creeping on sand ridges bordering the beaches.

Dichondra repens, Linn. Supp.
Loo Choo. On shaded banks.

Solanaceae.

Solanum nigrum, Linn. supra.
Bonin I. Kakeah I.

Solanum Osbeckii, Dunal. in D.C. Prodr. 13, 1, 179. S. biflorum Hook. & Arn. Bot. Beech., 267?
Loo Choo & Bonin Islands. Plant 2-4 feet high in shady thickets

Physalis Peruviana, Linn.; Dun. ~~in D.C. Prodr.~~ l.c. 446.
Bonin Island. A common weed

Physalis pubescens, Linn. Dun. l.c. 446.
Kekeah I.

Capsicum annuum, Linn.?; Dun. l.c. 411?
Loo Choo growing by roadside.

Capsicum pyramidale, Mill.?; Dunal l.c. 414?
Bonin Island. Escaped from cultivation
Pods yellow.

Capsicum cordiforme, Mill.; Dunal. l.c. 427
Bonin I. On densely wooded hills. Flowers white (½ inch broad) Fruit dark purple. Plant 1-3 feet high & much branched.

Lycium Chinense Mill.; Dunal. l.c.

510. Loo Choo within enclosures, Flower purple.

Scrophulariaceæ

Mazus rugosus Lour. Supra Amakerrima? J. Small. Loo Choo Harbor I. In wet ground Flowers purple.

Buchnera verbenæfolia, Spreng. Supra. Kakeah I. Loo Choo. In wet fields. Flowers reddish purple.

Veronica agrestis, Linn.; Benth in Dc. Prodr. 10, 487.

Loo Choo & Kakeah I. Flowers purple.

Veronica longifolia, Linn.? Benth. in Dc. Prodr. 10, 465.?

Oosima. Flowers white. A few very imperfect specimens were found at midwinter.

Veronica Anagallis, Linn.; Benth in Dc. Prodr. 10, 467.; Sieb. & Zucc. Fl. Jap. Fam. Nat. 2, 19.

Ugenku Island in fields. Flowers white or light pink

Veronica ~~officinalis~~ maddenii, Linn.; ~~Benth.~~

~~in DC. Prodr. 10, 472.~~

Loo Choo. Flowers purple.

Limnophila reflexa?
Loo Choo

Orobanchaceæ.

Æginetia Indica, Roxb. Supra.
Annakervina T. J. Small. Bomm. 2.
Flowers purple.

Acanthacea

Ruellia Japonica. Thunb. Fl. Jap. p. 254. & Ic. Pl. Jap. t. 49. Loo Choo; around ponds.

Flowers yellow, as described by Thunberg. The filaments are more or less monadelphous at the base; ~~the two~~ one pair much shorter; the fifth stamen sometimes present, and with an imperfect anther. Ovules 4, disposed throughout nearly the whole length of the ovary; the partition evanescent. Ambiguous between Ruellia (as limited by Nees) and ~~the~~ Strobilanthes with open lax spikes.

Acanthaceae

Codonacanthus? pauciflorus. Nees

Prunna glabra Sp. n. Tota glaberrima corolla glandulosa excepta foliis ellipticis basi longe attenuatis obtuse acuminatis petiolatis. paniculis terminalibus floribus subregularibus calyce quinquedentato dentibus obtusis. (A large bush on hillside, Fl. yellow Kotonasima fosima. Fl. whitish tube yellow within I. Sm)

Ruellia? Japonica, Thunb. Fl. Jap. 254; Ic. Fl. Jap. 4?; Nees in DC. Prodr. 11, 153?

Loo Choo, around ponds. Flowers yellow. Our too young & too scanty specimens agree very well with the figure ~~quoted~~ referred to except that the flowers are few & nearly hidden by the upper leaves. Perhaps, with age, the ~~[illegible]~~ flowering branches would would elongate & become as represented in the figure.

Rostellularia procumbens, Nees in DC. Prodr. 11, 371; Hook. & Arn. Bot. Beechey, 268.

Takunosima I. Loo Choo & Agenku I.

Dicliptera Chinensis, Nees, in DC. Prodr. 11, 477.

Loo Choo. Leaves on both sides & stem lineolate as in D. riparia. Seeds as in D. Burmanni.

Verbenaceae.

Verbena officinalis, Linn.; Hook. & Arn. Bot. Beechey, 268.
Loo Choo

Lippia nodiflora, Rich.; Schauer in DC. Prodr. 11, 585; Hook. & Arn. l.c.
Loo Choo.

Premna 235—

~~Premna divaricata, Wall.; Schauer, in DC. Prodr. 11, 631.~~
~~Loo Choo, in cemeteries & shaded thickets. Flowers greenish white. A low branching bush.~~

Callicarpa tomentosa, Willd. Supra.
Bonin I. Summit of hills. A large spreading bush. 5–12 feet high. Flowers light purple.

Callicarpa purpurea, Juss.; Schauer in DC. Prodr. 11, 645; Hook. & Arn. Bot. Beechey, l.c.
Bonin I. A small branching bush 3–5 feet high. Flowers purple.

Bot. Beechey, p. 305
Callicarpa subpubescens, Hook. & Arn. ~~l.c.~~,
Bonin I. This answers well to the des=

cription in the work above quoted.

Clerodendron inerme, R. Br.; Schauer in DC. Prodr. ~~X~~ 11, 660; Hook. & Arn. l.c. 265.
Loo Choo in hedges. Flowers white—stamens & style purple. A bush 4-6 feet high.

Clerodendron trichotomum, Thunb.; Schauer in DC. Prodr. 11, 668; Sieb. & Zucc. Fl. Jap. Fam. Nat. 2, 29.
Loo Choo. A large bush 4-8 feet high corolla-limb white—tube reddish.

Vitex ~~tri~~folia, Linn. var unifoliolata supra
Bonin 2.

Callicarpa Japonica, Sieb. & Zucc. Fam. Nat. Jap. 2. p. 30; an Thunb.? Loo Choo Islands; in fruit.

Labiatæ.

Calamintha gracilis Benth.? in DC. Prodr. 12, 232?

(Wood, Loo Choo. Flowers light purple or pink

Calamintha Chinensis, Benth. l.c.

~~Loo Choo~~ Mosla repens, Hook. & Arn. Bot. Beechey, p. 268; M. Clinopodium, Sieb & Zucc. Fl. Jap. Fam. Nat. 2, 33?

Loo Choo sides of ditches. Flowers purple

Scutellaria Indica, Linn. Supra

~~Loo Choo~~ (Umakesima & J. Small.)

Scutellaria hederacea, Kunth & Bouché. Benth. in DC. Prodr. 12, 426. Gray in Perry's Exp. l.c.

Loo Choo & Oosima. Open grounds. Flowers light purple. The same as a Japanese specimen gathered by Dr. Morrow, and agreeing with the published character of S. hederacea.

Anisomeles ovata, Brown. Supra

Loo Choo. Shady wood. Introduced?

Leucas Javanica, Benth. Lab. p. 601 & DC. Prodr. 12, 528; Hook. & Arn. Bot. Beechey, 268.

Loo Choo. Shady thickets. Flowers white

The bracts are very small

Ajuga decumbens, Thunb. Fl. Jap. p. 243, non Benth. ~~Ajuga [illegible]~~ A. remota, Benth.? ~~in DC. Prodr. 12. p. 597~~; Gray in Perry's Jap. Exp. l.c.

~~Takunoosima~~ (Katonasima. Growing on stone walls ~~Flowers white~~

Flowers white. Inflorescence less leafy than in the Japanese specimens; the bracts seldom exceeding the flowers.

Plantaginaceae.

Plantago major, Linn.; DCne in DC. Prodr. 13, 1, 694.

Loo-Choo. Roadsides; Kakeah. 7.

Plumbaginaceæ.

Statice Sinensis Girard? Boiss. in DC. Prodr. 12, 642?

Kokeah. 2. & Loo-Choo, (Oosima, J. Small) Growing in crevices of rocks by the sea shore Flowers yellow ~~Hardly~~ Little more than six inches high from a thick perennial? root. The specimens from Loo Choo are only 2-4 inches high.

Nyctaginaceae.

Mirabilis jalapa, Linn.; Chois. in DC. Prodr. 13, 2, 47.
Loo Choo. J. Small.

Neea insularis n. sp. ~~238~~ arborea, foliis membranaceis lanceolatis basi inequalibus acutis? petiolatis, paniculis foliis brevioribus brachiatis ramis ramulisque binis vel ternis floribus umbellatis. Bonin. A stout widely spreading tree 15-20 ft. high. Fl. greenish-yellow.

Boerhaavia diffusa, Linn.; Chois. l. c. 452; Hook. & Arn. Bot. Beech. 269.
Loo Choo. On rocky banks.

Chenopodiaceæ.

Chenopodium acuminatum, Willd.; Moq. in DC. Prodr. 13, 2, 62. C. Vachellii; Hook. & Arn. Bot. Beechey, 269.
Loo Choo, on sand beaches.

Chenopodina australis, Moq. in DC. l.c. 163; Suæda australis Hook. & Arn. l.c.
Loo Choo, on rocks ~~washed by the~~ covered at high tide ~~at high water~~.

Amaranthaceæ

Celosia argentea, Linn. Sp. Pl. 296; Moq. l.c. ~~in DC.~~ 243; Hook. & Arn. l.c. 269.
Loo Choo, growing as a weed in cultivated grounds

Amaranthus spinosus, Linn.; Moq. in DC. l.c. 260.
Loo Choo in waste places.

Euxolus viridis, Moq. in DC. l.c. 273.
Loo Choo A weed in fields.

~~Iresine~~ ~~247~~
Iresine 246

Amaranthaceæ.

Achyranthes aspera, Linn. supra Hook. & Arn. l.c. 269; Sieb. & Zucc. l.c. 85.

Bonin Islands: growing abundantly as a weed.

Achyranthes bidentata, Blume, Bijdr. 445; Moq. in DC. l.c. 312.

Loo Choo in woods near Shudi.

Iresine, (Philoxerus) spathulata sp. n. procumbens glabra caule angulata articulis brevibus foliis lineari-spathulatis, obtusis capitulis magnis calycis segmentis oblongis obtusis.

Loo Choo In crevices of rocks at high water mark or lower?. Fl. reddish each sepal with two narrow green spots about the middle

Basellaceæ.

Basella alba, Linn.; Moq. in DC. Prodr. 13, 2, 23; Wright, Fe, 876.
Loo Choo. On stone walls, Small flowers purple.

Polygonaceae.

Rumex acetosa, Linn.; Meisn. in DC. Prod. 14, 64.
Katonosima I.

Polygonum Japonicum, Meisn ~~in~~ l.c. 112,
Loo Choo in ditches,

Polygonum Parettii, Meisn. l.c. 113.
Loo Choo in ditches. Flowers white,

Polygonum Chinense, Linn. Supra,
Loo Choo By roadsides & on walls, ~~[illegible]~~

Polygonum perfoliatum, Linn. Sp. Pl. 521; Willd. Sp. Pl. 2, 454; Meisn. l.c. 132; Sieb. & Zucc. l.c.
Oosima near the seabeach

Lauraceae.

Cinnamomum pedunculatum, Nees. Syst. Laur. 77; Sieb. & Zucc. l.c. 68.
Loo Choo in woods, common. A small tree 8–15 feet high. Bonin Islands.

Tetranthera Japonica, Spreng. Syst. Veg. 2, 266; Nees. ~~Syst.~~ l.c. 324; Sieb. & Zucc. l.c.
Loo Choo in thickets. A bush 5-8 feet high.

Cassytha filiformis, Linn. Supra Bonin Islands.

Thymelaceæ.

Wikstroemia retusa A. Gray? ~~235~~ 236

– N. Pacific Expl. Exp.

W. Foliis crassiusculis cuneato-obovatis subsessilibus apice rotundatis saepius retusis, supra fere glabris, subtus pallidis venis primariis adscendentibus rectiusculis prominulis, venulis minime reticulatis supra venis ramulisque fere obsoletis; fasciculis florum subsessilibus; floribus ramulisque pubescentibus; calycis lobis ovatis obtusissimis tubo multum brevioribus; drupa subglobosa. Loo Choo Islands. Charles Wright in N. Pac. Expl. Exp. Leaves about an inch and a half long. Fl. 5 lines long

Santalaceæ.

Thesium   Sp. ?   257

Thesium decurrens, Blume; var. longibracteatum, A. DC. Prodr. 14, p. 653. (Vide Jap. coll. p.). T. australe, Hook. & Arn. Bot. Beech. p. 270, non R. Br.   Loo Choo Islands.

Elaeagnaceae.

Elaeagnus tenuiflora, Benth. in Kew. Gard. Misc. 5, 197; Schlecht. in DC. Prodr. 14, 613.

Common on hillsides. A branching bush 4–8 feet high. Flowers white.

Loo Choo, Bonin &c.